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CURRENT STUDIES ON THE VALUE OF CHILDREN

On the nature of the transition in the value of children

Rodolfo A. Bulatao

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CURRENT STUDIES ON THE VALUE OF CHILDREN is a subseries of PAPERS OF THE EAST-WEST POPULATION INSTITUTE. It presents analyses of data from the Value of Children project, a cross-national study of parents' perceptions of the satisfactions and costs of children, and findings from similar studies.

All papers in Current Studies will be assigned the number 60, to indicate that they are part of Papers of the East-West Population Institute. The serial number for each subseries paper, however, will include a letter suffix (A, B, etc.) designating its sequence in the subseries.

Editor: *James T. Fawcett*

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PREFACE

A shorter version of this paper was presented at the Conference on Comparative Fertility Transition in Asia, held in Tokyo in March 1978. Data for the study were collected as part of a cross-national project, described in the Foreword, which also identifies the other investigators and the funding sources.

EDITOR'S FOREWORD

This paper is the first in a new subseries of Papers of the East-West Population Institute, entitled Current Studies on the Value of Children. The subseries will consist mainly of comparative analyses of data from the Value of Children (VOC) project, a cross-national study of parents' perceptions of the satisfactions and costs of children. Also included will be summaries of findings from individual countries in the VOC project, as well as reports based on studies that are not part of the project but have a similar focus.

The VOC project began in 1972 and was carried out in two phases. The first phase consisted of interviews with relatively small samples of parents in six countries. Results of the first phase of the project have been reported elsewhere.[1] In the second phase, which is the focus of this subseries, interviews were conducted with larger samples of husbands and wives—in most cases nationally representative samples—in eight countries. These surveys were carried out in Indonesia, the Republic of Korea, the Philippines, Singapore, Taiwan, Thailand, Turkey, and the United States.[2] In addition, a special study of wives with one child in the West German state of Bavaria was included in the second

1 Comparative results for all six countries are reported in Fred Arnold and others, The Value of Children: A Cross-National Study, Vol. 1, *Introduction and Comparative Analysis* (Honolulu: East-West Population Institute, 1975). Separate reports for each country are also available or projected in the same series (Vols. 2–7).

2 Coinvestigators from these eight countries were involved in the project from the outset and participated in the design and pretesting of the core questionnaire; they also had responsibility for the conduct of the research in their own countries. The coinvestigators were: Masri Singarimbun and Russell K. Darroch (Indonesia); Sung Jin Lee (Republic of Korea); Rodolfo A. Bulatao (Philippines); Peter S.J. Chen, Betty Jamie Chung, and Eddie Kuo (Singapore); Tom T.H. Sun and Tsong-Shien Wu (Taiwan); Chalio Buripakdi, Nibhon Debavalya, and Visid Prachuabmoh (Thailand); Cigdem Kagitcibasi (Turkey); Lois W. Hoffman, Fred Arnold, and James T. Fawcett (United States). Support for the studies in these countries and for the comparative analysis was provided by the East-West Population Institute, the International Development Research Centre, the Ford Foundation, the Rockefeller Foundation, the Smithsonian Institution, the Research Institute for the Study of Man, and the U.S. National Institute for Child Health and Human Development.

phase research.[3] The surveys in these nine countries were conducted during the period from January 1975 to March 1977.

This foreword provides an overview of the content and methodology of the second phase of the VOC project. The overview contains sufficient background, we believe, for most readers of the papers in the subseries. For researchers interested in greater detail, however, selected Technical Notes are available on request from the EWPI Publications Office. These reports, prepared by Rodolfo A. Bulatao and Constancia Angeles, provide information about the questionnaire (Technical Note No. 5), the comparative codebook (No. 2), sampling procedures (No. 4), and survey procedures (No. 6).

In the sections that follow, general information is provided about the purpose, content, sampling procedures, and research methodology of the VOC project.

Purpose and content

The objective of the VOC project is to develop new knowledge about childbearing motivations and the relationship of these motivations to family size preferences and fertility. An assumption of the study is that perceptions of the satisfactions and costs of children have an important influence on decisions about family size. Thus survey measurements in the study are designed to assess attitudes and values related to the variety of satisfactions derived from children and the costs involved in rearing them. Also measured are perceptions of alternative sources of satisfaction, as well as diverse background factors and mediating variables. With this rich set of data, analyses are directed toward understanding the determinants and consequences of fertility behavior among different social and cultural groups at various stages of the life cycle.

The project reflects a conceptual approach that is basically utilitarian—i.e., it is concerned with the value of children *to parents.* Social, cultural, and biological values of children are not ignored, but the survey method necessitates that these dimensions be measured through the filter of parental perceptions. Other research approaches, such as community studies and assessments of actual economic costs and

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3 The West German study was added to the VOC project after the core questionnaire had been designed. A modified version of the questionnaire was developed for West Germany by coinvestigators Esther R. Mechler, Andrejs Urdze, and Brian R. Flay. Support for the study was provided by the Deutschen Forschungsgemeinschaft and the Rockefeller Foundation.

benefits, are useful and complementary in providing different perspectives on the value of children.

The VOC project is especially indebted intellectually to work in the fields of psychology and economics.[4] But as the project has evolved and as the cross-cultural data have been examined, a research perspective has been developed that differs from the earlier psychological or economic approaches, yet retains elements from both of them and from other work in sociology and demography. This evolution and the potential for convergence are discussed in a number of recent publications,[5] including the present paper.

Our interest in the value of children is not purely academic, although it should be noted that there has been until recently remarkably little basic research on motivations for childbearing. A major impetus for the project was concern about rapid population growth and the need to develop new ideas for public policies that might influence growth rates. Such policies are essentially efforts to alter societal patterns of fertility motivations. Empirical data about the nature of those motivations, their variations across groups, and their relationships to other desires and value orientations should be of obvious benefit in the formulation of population policies and programs. Our procedures for obtaining such data are described in the following sections.

Questionnaire, sampling, methodology

The questionnaire used for the large-scale surveys was similar in many respects to the one designed for the first phase of the project, but it was improved through experience and expanded to cover topics not included in the earlier research. Parts of the questionnaire were devoted to standard social, economic, and demographic information about the respondent and the household. I will not discuss those here but will review, in summary form, the portions more directly relevant to assessing the value of children.

4 The most influential sources were Lois W. Hoffman and Martin L. Hoffman, "The value of children to parents," in James T. Fawcett, ed., *Psychological Perspectives on Population*, pp. 19–76 (New York: Basic Books, 1973); and Richard A. Easterlin, "Towards a socioeconomic theory of fertility: a survey of recent research on economic factors in American fertility," in S.J. Behrman and others, eds., *Fertility and Family Planning: A World View*, pp. 127–56 (Ann Arbor: University of Michigan Press, 1969).

5 See, for example, Fred Arnold and others, *op. cit.*, and James T. Fawcett, "The value and cost of children: converging theory and research," in Lado T. Ruzicka, ed., *The Economic and Social Supports for High Fertility*, pp. 91–114 (Canberra: Australian National University, 1977).

In format, the questions included structured and unstructured items and combinations of the two. Quantitative scaling of responses was used extensively, but qualitative data were also obtained from open-ended questions and were analyzed through content analysis. In general, we tried to use more than one type of measurement for dimensions of the value of children that we considered important. The content of the questionnaire was decided upon in workshops involving all of the investigators. Pretesting of various versions of the questionnaire in all countries resulted in extensive modifications. Rigorous procedures for translation and back-translation were used in most countries, to assure conceptual equivalence of the items.

The tables in this first comparative paper illustrate results obtained from various questionnaire items, with emphasis on responses to open-ended questions on the advantages and disadvantages of having children. Other types of questions were used to measure the value of children in general, the next child, certain numbers of children, male and female children, and so on. In addition, questions were included to compare the value of children with the value to the respondents of other objects, activities, or goals. Following is a summary of the questionnaire items that dealt specifically with the value and cost of children:

Open-ended questions

Advantages and disadvantages of having children, compared with not having any children

Reasons for not wanting more or fewer than the respondent's desired number of children

Reasons for wanting sons and daughters

Qualities desired in sons and daughters when they are grown

Feelings about having only one child

Children as a means to fulfill life values rated as important by respondent

Aspects of raising children that entail the greatest expense

Aspects of raising children that cause worry and emotional strain

Activities of respondent that are curtailed or precluded by having children

Ways in which a person's life is changed by having children

Structured questions

Reasons for wanting or not wanting another child (22 items)

Preferred sex composition among children

Importance for the child of having siblings

Qualities desired in children (5 items)

Contribution of sons versus daughters to life values rated as important by respondent

Contribution of small versus large number of children to life values rated as important by respondent

Age at which children provide the most happiness for parents

Satisfactions provided by having children (19 items)

Expectations concerning economic or practical help from sons and daughters (5 items)

Perceived economic burden of different numbers of children

Age at which a child is most costly

Whether a son or daughter is more costly

Degree of worry and emotional strain caused by children

Whether a son or daughter causes more worry and emotional strain

Extent to which children interfere with other activities

Ranking of four types of costs of children

The classification scheme for values and disvalues presented in Bulatao's paper represents one way of organizing the diverse dimensions of the value of children within a coherent framework (see p. 7). The numerous response categories are indicative of the wide range of variables assessed, covering areas that might be broadly characterized as psychological, social, and economic. The qualitative data from the project were coded in highly specific categories to allow rearrangement of the responses to fit various conceptual or theoretical schemes.

Sampling procedures

Samples for the survey in phase two of the VOC project were designed to be large enough to permit analysis of various subgroups and to be nationally representative where possible, to allow generalizations about the country as a whole. Married women in the childbearing years were the main target group, but a subsample of husbands was also interviewed in each country except West Germany. The size of these subsamples ranged from about one-quarter to about one-half of the number of wives interviewed.

Decisions about the details of sample size and sampling procedures were left to the investigators in each country, most of whom had the assistance of sampling consultants. Stratified, multi-stage samples were drawn in all countries, utilizing systematic random selection or simple random selection procedures. Excluding West Germany, the number of wives interviewed ranged from 977 to 2,614; the number of husbands, from 382 to 1,311. In all, more than 20,000 respondents were interviewed in the second phase of the VOC project (14,723 wives and 5,681 husbands). The upper age limit for wives was 39 in most countries, but 40 in Singapore and 44 in Taiwan.

National representativeness was the aim in all countries except Indonesia and West Germany, although certain areas were excluded in several countries, for such reasons as accessibility and security problems. The Indonesian sample was designed to provide comparison of two major ethnic groups, the Javanese in Central Java and the Sundanese in West Java. The West German sample was limited to a sample of 296 young wives with only one child in the state of Bavaria; in contrast to other countries, the VOC study in Germany was designed with the primary aim of providing insight into the reasons for a declining birth rate and an increase in the prevalence of one-child families.

Further information about the type of sample in each country is provided in Table 3 of this paper; additional details about selection procedures and other matters are available in VOC Technical Note No. 4.

Research procedures

The principal investigator in each country had responsibility for organizing the fieldwork and setting up procedures for coding and checking data. A common framework for research procedures was agreed upon at three workshops of coinvestigators that were convened at various stages of the project, but detailed arrangements for implementation of the research varied from country to country.

The core questionnaire was augmented in most countries with items of particular interest to the investigator or deemed useful in the cultural context. Translations of the English core questionnaire were necessary in all countries but the United States and were usually carried out with independent back-translations and other procedures for ensuring conceptual equivalence. Translations were not always satisfactory, however, which is not surprising in view of the complexity of the task. In the Philippines translation into ten dialects was required, for example, and in Indonesia the questionnaire was translated first

into Bahasa Indonesia and then from that language into Javanese and Sundanese. The research results are undoubtedly distorted to some extent by translation difficulties, but we believe this is not a major problem for most items in the questionnaire.

Interviewers were in most cases college students or college graduates and most were women. Male interviewers (in addition to females) were employed in Indonesia, the Philippines, Thailand, and Turkey. Housewives with at least a high school education were employed in Taiwan, and many of the interviewers in the United States were housewives employed part-time by a survey research organization. In both Taiwan and the United States most of the interviewers had prior experience in other research projects.

The length of training sessions for interviewers ranged from a few days to two weeks. In all cases training included practice interviews, and role-playing was often a part of the training. Detailed interviewers' manuals and questionnaire guides were prepared in each country, based partly on the documents used in the first phase of the research, and in some cases on materials compiled by the University of Michigan's Survey Research Center for the second-phase U.S. study (which was the first study to go into the field). The sharing of training manuals and other materials was another means, in addition to workshops, for enhancing comparability among countries.

All countries made arrangements for close supervision and editing and checking of work done by interviewers. Often editing was done while the team was still in the field, to facilitate corrections or reinterviews. Such supervision led in a number of cases to interviewers being dismissed and their work being discarded. Throughout the project, emphasis was given to quality of data collection procedures.

Similar emphasis was given to quality of coding procedures, especially for open-ended questions. In nearly all countries independent double-coding was employed, in some cases for all questionnaires, in others for a sample of questionnaires, and in still others for selected items on the questionnaire. The usual computer checks for consistency and errors were run on the data after coding.

Initially data files were prepared for each country separately. These data files, along with codebooks, were then forwarded to the project coordinator, Rodolfo A. Bulatao, for compilation into a single data file. The compilation required transformation for much of the data, since coding procedures, although similar, were not identical across countries. The comparative data file was separately checked for consistency and errors. These data should be essentially accurate and valid,

in view of the care taken in data collection and coding. Nonetheless, in a project as large as this one, with interviews conducted in a variety of cultural settings, some errors and variations in meaning of responses are bound to have occurred. Where similar patterns and trends are shown across a number of countries and subgroups, however, we feel that the data can be interpreted with a high degree of confidence.

Current Studies on the Value of Children

Most of the papers in this subseries will draw upon the comparative data from the VOC project, as noted earlier. These reports will be prepared by the coinvestigators in the VOC project and their associates. In addition, we will welcome the submission of manuscripts from persons not connected with the VOC project who have carried out similar studies. We are aware of numerous such studies in countries around the world, and we would be pleased to enrich this series by including papers that deal with the same topic but reflect different conceptual, methodological, or cultural perspectives.

James T. Fawcett

ABSTRACT *A review of explanations for the fertility transition identifies two factors not related to the demand for children, contraceptive availability and delayed marriage, and five factors related to demand. This paper evaluates the five demand factors—mortality reduction, rising aspirations, vanishing economic roles for children, the emergence of the conjugal family, and weakening cultural props for high fertility—by comparing the values and disvalues parents attach to children in seven Asian countries and two Western countries at different stages in the fertility transition. Both open-ended and structured measures of values and disvalues are utilized. Comparisons are also made across areas within two countries, and between parents limiting themselves to small families and parents with large families who have no intentions of family limitation. The pattern of values essentially supports the economic explanation, disconfirms the cultural explanation, and provides partial support for the other explanations.*

Although demographic transition theory has been characterized as a historical generalization in search of an explanatory principle, writings on the transition have in fact offered a plethora of explanations for fertility decline. In this paper I attempt to distinguish several major explanatory factors that others have touched on, focus on those factors that involve changes in the desire for children, and determine if cross-sectional survey data on parents' perceptions of the values and disvalues of children in seven Asian countries (and two Western countries for comparison) are consistent with the operation of these explanatory factors. The paper thus provides a way of organizing and interpreting the increasing data being collected on the value of children to parents.

In 1967 Concepción and Murphy denigrated demographic transition theory: "The theory is not a theory but a description of a series of historical events that have occurred with some regularity. . . . Demographers have proclaimed a theory when there is no theory. There is only a crying need for a theory" (1967:6). What Concepción and Murphy considered recent theoretical beginnings and labeled "technology theory" were little more than rationalizations for family planning programs: "All the world is anxious for lower fertility but does not know how to go about it" (p. 9). In 1971 Tabbarah also maintained that demographic transition theory, although describing when

and in what pattern birth rates fall in different countries, gives "no explanation of why that decline took place" (1971:258).

Although several of the authors who first identified demographic stages in the historical evolution of societies (Thompson, 1928; Blacker, 1947) may not have spent much time on the reasons for fertility decline, explanations in fact antedate the formulation of transition theory (e.g., Landry, 1909, 1934; Stix and Notestein, 1940). Before Notestein introduced the term "demographic transition" (1945: 41), the debate about physiological causes of the decline had been generally settled. Assessments of the causal impact of modern contraceptives had also reached conclusions that have remained largely unchanged since then: that "modern birth control is as much the result of new interest in family limitation as its cause," according to Stix and Notestein (1940:150)—a balanced view that is difficult to fault today. The most important factors in fertility decline, according to Notestein (1953:18) were

> the growing importance of the individual rather than the family, and particularly the extended family group; the development of a rational and secular point of view; the growing awareness of the world and modern techniques through popular education; improved health; and the appearance of alternatives to early marriage and childbearing as a means of livelihood and prestige for women.

These factors had the greatest force, he added, in urban-industrial society. Here is a whole series of explanations containing, according to Caldwell (1977:30) "almost in mature form," the seeds of all later theoretical developments. If this effort does not qualify as theory under Concepción and Murphy's criteria of "extracting the fundamental processes of a phenomenon and identifying the crucial variables" (1967:6), the reason must be the acknowledged abundance of explanations rather than their scarcity.[1]

To deal with this abundance, and with the elaborations, reorientations, restatements, and reconceptualizations provided by later writers, it is convenient to abstract a few basic explanatory factors that under-

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1 Jones (1977:9) describes sociological fertility theory as "a broad descriptive framework and a mass of *ad hoc*, partial explanations which have some relevance and validity but whose very eclecticism is seen by some as a standing rebuke to the profession and by others as simply consistent with the complexity of the phenomena being studied." More than eclecticism, it would appear that some demographers have failed to see theory in these explanations because they form no simple paradigm for specifically demographic research (Kuhn, 1970). By contrast, questions about the timing, rate, spread, and demographic components of fertility decline can give, and have given, rise to a whole series of demographic studies.

lie the superstructure of theory. This is not the same thing as the common practice of identifying the crucial variables. That exercise often leads to lists that include women's education, men's education, women's wages, men's wages, family income, and infant mortality (which Schultz [1976] has identified as the essential variables in microeconomic fertility theory), or variables like literacy, life expectation at birth, primary school enrollment, male labor force in nonagricultural pursuits, urbanization, hospital beds, newspaper circulation, telephones installed, secondary school enrollment, and gross domestic product (which Oeschli and Kirk [1975] use to identify transition thresholds). Such variables cannot explain the historical fertility decline unless some intermediate links can be forged to individual fertility-related behavior; and these links, often though not necessarily social-psychological, are what I seek under the rubric of explanatory factors.

EXPLANATORY FACTORS FOR THE FERTILITY TRANSITION

For current purposes, I assume there are seven basic explanatory factors:

1. increased contraceptive availability and efficiency
2. delayed marriage
3. mortality reduction
4. rising aspirations
5. vanishing economic roles for children
6. the emergence of the conjugal family
7. weakening cultural props for high fertility

Other classifications of the explanatory factors for the fertility transition may be possible, but this set can be made to cover all the major explanations I am aware of, as will be detailed below.[2] These factors might be seen as intervening between socioeconomic development, modernization, or Westernization (however the process is characterized) and fertility decline, though in appropriate circumstances, and, conceivably, with greater frequency nowadays, these factors may operate independently of large-scale societal transformations.

For Easterlin (1974), fertility determinants operate by affecting the demand for surviving children (not merely for a particular number of births), the potential supply of children (the number that biology and

2 In his interpretation of demographic transition theory, Caldwell identified three of these seven factors as the "mainstream arguments" for high fertility in traditional settings—"high mortality, the lack of opportunities for individual advancement, and the economic value of children" (1977:33). His own theorizing focused largely on the third factor.

culture produce when no deliberate regulation is evident), or the costs of fertility regulation or family limitation.[3] The seven explanatory factors can fit under these three headings. The first factor, contraceptive availability and efficiency, which is understood here to include not only physical but also psychological availability and use-effectiveness and may also be somewhat stretched to include abortion, obviously affects the costs of family limitation. The second factor, delayed marriage, shall be assumed to be a supply factor. As Coale (1975) argued, the postponement and avoidance of marriage in the European transition was probably not related to any desire to reduce fertility, but to such considerations as the need for economic independence and the desire for separate living quarters. Its effect on fertility, therefore, through postponing childbearing and shortening the socially accepted childbearing period, is probably unrelated, other factors aside, to any desire for fewer children. The third factor, mortality decline, has both supply and demand implications, as will be discussed below. The remaining four factors clearly affect the demand for children.

For completeness, two factors involved in the fertility transition might be added that, far from explaining the transition, operate simultaneously with the previous seven factors but in the reverse direction to raise fertility. These are (8) improved fecundity (or fecundability due to reduced breastfeeding), which is a supply factor, and (9) higher incomes, which Easterlin treats as affecting demand but which Spengler (1966) treats as distinct. If the effects of income on the other factors–particularly aspirations–are controlled, the direct effect should be to allow couples to afford more children, assuming that children are not an inferior good (Becker, 1960). Table 1 summarizes all nine factors, some of which will be discussed further below.

The relative importance of demand, supply, and family-limitation costs in the fertility transition is difficult to assess. A reasonable, if oversimplified, assumption would seem to be that changes in supply and family-limitation costs are dominant in the early stages of the transition, and changes in demand become important after the early declines (Knodel, 1977; Coale, 1975). At any rate the demand factors account for a significant portion of the decline and are essential to it. As Coale (1973:65) has put it, a prerequisite for a major fall in marital fertility is that "perceived social and economic circumstances must make reduced fertility seem an advantage to individual couples."

3 Easterlin uses the term "fertility regulation." The term "family limitation" is preferable, however, because not all types of fertility regulation are relevant. Parity-independent fertility regulation is properly considered a supply factor affecting natural fertility.

TABLE 1 Explanatory factors for the fertility transition

Factor (characterization)	Locus of effect
Increased contraceptive availability and efficiency	Family-limitation costs
Delayed marriage	Supply of children
Mortality reduction (Demographic) Insurance effect Price effect Emotional investment	Supply of children and demand for children
Rising aspirations for self and children (Psychological)	Demand for children
Vanishing economic roles for children (Economic)	Demand for children
Emergence of the conjugal family (Social) Locus of costs and demands Companionate marriage Child-centeredness	Demand for children
Weakening cultural props for high fertility (Cultural) Lineage and kin group Religious and social norms Social status	Demand for children
Improved fecundity	Supply of children
Higher incomes	Demand for children

LINKAGES WITH THE VALUES AND DISVALUES OF CHILDREN

The demand factors should directly affect the values and disvalues of children that parents perceive, producing changes that may be considered the value-of-children transition. The values and disvalues attached to children are typically diverse, including economic concerns, psychological satisfactions, and social rewards. They are also considerably variable, being occasionally different for sons and daughters, for first-born, second-born, and later children, for younger and older children, and so on. Finally, they tend to be deeply felt and strongly held. For current purposes, a classification of values and disvalues shall be used that is based on theoretical distinctions (e.g., L.W. Hoffman and M.L. Hoffman, 1973) as well as on cross-cultural findings derived from a variety of survey questions (Arnold and others, 1975; Bulatao, 1975). The three major clusters of values of children, in this classification, are: instrumental assistance from children, covering the uses--economic,

practical, kin-group strengthening, status-providing—to which children can be put; rewarding interactions with children, covering the socio-emotional rewards, companionship, friendship, and fun that children generate; and psychological appreciation of children, covering the psychological impact of children on parents. The four major clusters of disvalues are: direct financial costs of children; childrearing demands other than the financial, covering the added work, the strain, and responsibility; restrictions on parents, social and personal as well as occupational; and costs to social relationships, covering marital strains and overpopulation. The individual values and disvalues in each cluster, listed in the Exhibit, represent all of those that have been commonly identified in studies of the value of children.

It is assumed that the supply and the family-limitation cost factors do not directly affect these values and disvalues, though they may have indirect effects in two ways: through affecting the demand factors and through affecting actual fertility, which could have feedback effects on values and disvalues. The demand factors, on the other hand, should directly affect values and disvalues attached to children and may in fact operate by modifying those values and disvalues.

Each of the demand factors is complex. None, for instance, is exclusively economic, or exclusively demographic, or exclusively psychological. However, as convenient shorthand, I will refer to mortality reduction as the demographic explanation, to rising aspirations as the psychological explanation, to vanishing economic roles for children as the economic explanation, to the emergence of the conjugal family as the social explanation, and to weakening cultural props for fertility as the cultural explanation. The predicted effects of each of these factors on values and disvalues are shown in Table 2 and will now be discussed. For later reference, each prediction has been assigned a letter to indicate the explanatory factor and a number to indicate the value or disvalue cluster affected.

Mortality reduction

The "demographic" explanation, mortality reduction, operates as a supply factor in a positive direction, increasing family sizes because more children survive, more women live to the end of their childbearing periods, and more men can reproduce over longer periods (Ridley and others, 1967). These effects are usually associated with improvements in fecundity, which is treated here as a separate factor. How mortality reduction affects demand is a complicated matter requiring careful distinctions.

EXHIBIT Advantages and disadvantages of having children, derived from content analysis of responses to open-ended questions

ADVANTAGES	DISADVANTAGES
Instrumental assistance	Financial costs
Help in housework	Cost of education
Help in old age	Other financial costs
Financial, practical help	Childrearing demands
Family name, line	More work
Religious, social obligations	Emotional strain
Adult status, social norms	Health, pregnancy
Rewarding interactions	Discipline
Companionship, love	Child's sickness
Happiness	Worry over child's future
Play, fun, distraction	Other childrearing problems
Marital bond	Restrictions on parents
Psychological appreciation	Tied down
Living through children	Can't work
Achievement, power	Costs to social relationships
Character, responsibility	Marital strains
Incentive to succeed	Overpopulation
Fulfillment	Other
Other	

At the societal level, it has sometimes been argued that mortality reduction will give rise, because of environmental and social factors, to an equilibrating fertility reduction (Davis, 1963). Societies are presumed to possess feedback mechanisms to maintain a stable equilibrium of births and deaths, around which temporary fluctuations may occur (Retherford, 1976:34). Whether this is so is an extremely complex issue that may be less a matter of empirical proof than general theoretical orientation. It seems more reasonable to adopt an opposing, social-Darwinian orientation that some societies at some points in their history have had such equilibrating mechanisms but others have not, and only those societies that have made adequate adjustments have survived as integral entities (see, for example, Coale, 1975). Then the fertility reduction will be seen to result not from mortality reduction directly but from the presence and operation of the equilibrating mechanisms, which in the present framework would be or would affect one or more of the other explanatory factors. There is a second reason for not accepting a direct mortality-fertility linkage as an effect of mortality reduction on demand for children: although fertility

TABLE 2 Predicted effects of demand-related explanatory factors on values and disvalues attached to children

Value or disvalue cluster	Explanatory factor				
	Mortality reduction (Demographic)	Rising aspirations (Psychological)	Vanishing economic roles for children (Economic)	Emergence of the conjugal family (Social)	Weakening cultural props (Cultural)
Value cluster					
1 Instrumental assistance	D1 Insurance against mortality should become less prominent		E1 Economic benefits should decrease		C1 Status, social benefits should become less prominent
2 Rewarding interactions				S2 Marital bond, companionship should become more prominent	
3 Psychological appreciation		P3 Should become more prominent			
Disvalue cluster					
4 Financial costs		P4 Should rise		S4 Should rise	
5 Childrearing demands		P5 Should become heavier		S5 Should become heavier	
6 Restrictions on parents		P6 Should become more prominent			
7 Costs to social relationships				S7 Marital strain should become more prominent	C7 Concern about overpopulation should become more prominent

NOTE: Each predicted effect is identified by a capital letter and a number. The letter represents the explanatory factor (as characterized in parentheses in the table heading); the number represents the value or disvalue cluster affected.

would be reduced in restoring equilibrium, the demand for children who survive to particular ages would be unchanged.

At the individual or family level, mortality reduction has been hypothesized to affect fertility through increasing the number of dependents (predominantly the young, though to some extent also the aged), through upsetting inheritance systems and generally overburdening social structures designed for lower survivorship, and through the reduced frequency with which couples have to "replace" lost children (e.g., R. Freedman, 1963:226–27). These effects, again, should not be considered changes in demand, because individual or couple targets for surviving children need not be affected. They are changes in demand for births, but not for children: the fertility reduction implied by these effects (with the minor exception of higher numbers of aged dependents) is such as to restore previous numbers of survivors.

Distinct from the replacement effect, and in fact affecting demand for children, is the insurance effect: instead of making up for child mortality, parents may have "extra" children ahead of time in anticipation of future mortality (Perlman, 1970; Wyon and Gordon, 1971; Abhayaratne and Jayewerdene, 1968). It is unlikely that parents would play the percentages exactly, having just enough children to compensate for probable losses, since mortality in the pretransitional period is not only high but also variable. It is much more likely that they would have more than necessary, and that more parents would have extra children than would lose them through mortality (O'Hara, 1972), so that desired family sizes would be smaller where there was no need to compensate in advance.

A second way in which mortality decline may affect demand is through changing the cost of children. Since it requires fewer births to provide some desired number of surviving children under lower mortality, the cost per survivor should decline (S. Cochrane and J. Cochrane, 1971). However, if one considers not only the costs of childbirth but also the costs of childrearing, it becomes evident that the cost per birth is higher under lower mortality. Whether costs will be perceived to increase or decrease, therefore, depends on whether couples decide on a particular family size or whether they make sequential decisions about each birth. Although the latter may be more likely (Namboodiri, 1972; Hass, 1974; Bulatao and Arnold, 1977), the ambiguity prevents any clear prediction about whether parents will perceive costs to rise.

There is a third way, suggested by El-Hamamsy (Heer, 1975:76), in which mortality reduction may affect the demand for children: under

low mortality conditions, parents may invest more of their emotional energy in each child, and therefore have fewer emotional resources to raise added children. As with financial costs, however, a contradictory argument may be made: under high mortality conditions, parents may feel greater emotional tension in regard to each birth because of the chances of sickness and death. It is not clear, therefore, whether the demand effects of mortality reduction are positive or negative. Apart from the prediction that posttransitional parents should perceive less need for the security of having many children, the effects on values and disvalues attached to children cannot be predicted.

Rising aspirations

The "psychological" explanation, rising aspirations, was identified as an important factor as early as 1890, when Dumont pointed to the desire of the French middle classes to advance in social rank—to obtain more wealth and power, more beauty, more perfection, more knowledge—as the motive for their smaller families. Political democracy was supposed to have made such strivings realistic rather than purely wishful. Although Dumont's depiction of *capillarité sociale* has focused attention on strivings for social mobility, the aspirations noted are not restricted to the socially ambitious, but more generally involve concern with standard of living, or the entire "range of satisfactions considered appropriate for a civilized existence" (Banks, 1954:10). To the attainment of these satisfactions, children, or at least many children, matter little. One's aspirations often embrace one's family, but the means of their satisfaction is extrafamilial, unlike many of the positive sanctions available in traditional communities.

It is often suggested that the source of these aspirations is urban or urban-industrial living (e.g., Notestein, 1945:40), though in the modern era global communication networks may be equally responsible. More proximate and more specific sources of the individual's aspirations may be the members of the husband's occupational group (Heberle, 1941; D. Freedman, 1963); one's adolescent experience, as affected by the income level of one's parents (Easterlin, 1961, 1966); and one's own current income level (Becker and Lewis, 1973). Most aspirations are assumed to be internalized by the individual couple. They may, however, also be the aspirations of the state or the government, which it imposes on the couple through legislation, as in the case of compulsory education.

Between husbands and wives there is some asymmetry in rising aspirations. Husbands' aspirations may rise first because of their links

with occupational and other networks outside the home, but wives' aspirations will eventually rise farther because they have a greater distance to go. Wives' aspirations also have greater impact on fertility because they are more likely to be inconsistent with raising large families. The desegregation of sex roles is essential to raising women's aspirations. Without this, women "cannot conceive of a glamor role or a career role which would compete with the childbearing role. They cannot complain that children prevent their getting outside the house, because outside activities are excluded anyway" (Davis, 1955:37). Creating economic and educational opportunities for women is one aspect of improving women's status; developing greater equality within the family is another, which may equally lead to higher aspirations.

An important distinction should be made between aspirations for oneself or one's spouse and aspirations for one's children. It is possible that these develop in sequence, aspirations for one's children and for one's immediate family generally rising earlier and being followed, in a later period when individualism has further undermined the family-centric perspective, by rising aspirations for oneself. A parallel distinction, in the microeconomic literature, is that between child quality and the time cost of chilren. The desire for higher child quality requires greater expenditures on children. The time cost factor operates differently: with rising aspirations for oneself, the time spent on children does not increase but begins to appear more valuable since it could more profitably be spent to attain new goals or to satisfy new needs.[4]

If children increasingly interfere with parents' new aspirations, we would expect the disvalues grouped under "restrictions on parents" to become more prominent. As argued earlier, this increase in prominence may be greater for wives than for husbands. Higher aspirations for children, on the other hand, cannot be achieved without additional expense. Children for whom parents have greater ambitions should cost more and require more of their parents' time, attention, and concern. These disvalues fall into two clusters, relating to financial costs and to childrearing demands. Aspirations may also have a positive side, insofar as children are concerned. Although most of the new aspirations are not satisfied through children, some of them may focus on children, particularly when alternatives are unavailable or proscribed. Achieve-

4 Microeconomists also speak of changing tastes in children, which might involve either child quality or preferences for commodities other than children. The concept of tastes is extremely vague and unspecific (one might add distasteful), almost like psychologists' use of the term "environment," and constitutes little more than those conditions one would lump under *ceteris paribus*.

ment motives, for instance, or the desire for personal fulfillment, may be relatively new aspirations that might be partly satisfied in bearing or rearing children. These values are classified in the psychological appreciation cluster, and one may therefore predict some, perhaps less dramatic, increase in the prominence of this cluster or of particular values in it.

Vanishing economic roles for children

The "economic" explanation, vanishing economic roles for children, has had several proponents. Coontz (1957) contended that variations in the demand for child labor explain the fertility transition. Among the wealthy, he said, child labor was of little consequence; slaves were available, and the wealthy could generally exert control over the productive activity of others. Among the poor, on the other hand, the decline in importance of child labor with the destruction of domestic industry in the West was temporarily compensated for by the labor demands of large-scale industrial production, until slower growth in these countries and the increased time and expense required to prepare an individual for productive labor made children a poorer investment. Legal restrictions on child labor might be added as another cause of the decline in the value of child labor, as might the development of pension and social security schemes that replace dependence on children.

In contemporary peasant societies, it has been contended—though Mueller (1976) disputes it—that children are of net economic benefit to their parents (Nag, Peet, and White, 1977; White, 1976). Expanding on this view, Caldwell (1977) has argued that there are only two types of fertility regime: pretransition, where children are of net benefit to their parents, and posttransition, where children are a net cost. The "great divide" between these two regimes is marked by the reversal in the direction of "intergenerational wealth flows." Before the transition, the net flow—counting not only money but also goods and services, as well as the benefits due to the extra political power exerted by a man with many children—is toward the parents; after the transition it is toward the children. The cause Caldwell identified for this reversal was a change in family structure.

Whatever causes the changes in the economic roles of children, the implication of these changes for perceived values is simply drawn: pretransitional parents should perceive there to be more economic benefits from children than posttransitional parents. These benefits are not limited to direct financial assistance, but may include assistance in old

age and practical help on the farm or around the house that is not directly remunerated. The instrumental assistance cluster includes all of these values, though it includes others also.

Emergence of the conjugal family

The "social" explanation, the emergence of the conjugal family, requires careful delimitation. Some sociologists have seen change in family structure as the central factor, the root and cause of all other social changes tied to fertility. With modernization, the argument goes, the family loses its centrality in the culture, and its functions are increasingly taken over by distinct institutions. As a result, "the family or kinship group no longer dominates the social and economic reward system and can no longer exert pressure toward large family size goals" (Goldscheider, 1971:148). This argument covers more ground than I intend, since other factors, like aspirations or the economic role of children, could easily be subsumed under it.

To the extent that the factors being considered can be viewed as analytically distinct, the focus here is specifically on the shift from the family extended through mutual obligations to the nuclear, conjugal family, in which parents and children form a relatively self-contained, independent unit. Caldwell (1977) referred to this as the emotional nucleation of the family, which he saw as a peculiarly Western arrangement undergoing rapid diffusion in non-Western areas. The shift in emotional focus should be more important than any shift in residential patterns, which is subject to such external influences as the housing market. In considering the development of the Western family, Shorter (1975) similarly emphasized the importance of sentiment in the historical emergence of the nuclear family. This first sexual revolution (which involved, besides the stress on romantic love, the sentiments of maternal love and domesticity) resulted in

> a special sense of solidarity that separates the domestic unit from the surrounding community. Its members feel that they have much more in common with one another than they do with anyone else on the outside—that they enjoy a privileged emotional climate they must protect from outside intrusion, through privacy and isolation (Shorter, 1975:205).

Caldwell saw emotional nucleation as leading to fertility decline through reversing the intergenerational wealth flow. Since this hypothesis has already been covered under the previous factor, one might ask here whether there are other ways that the nuclear, conjugal family may promote lower fertility.

Two types of answers have been suggested. First, the costs of rearing

children in a composite family or joint household do not impinge directly on the parents, but are distributed among all the members of the household. This is true both for economic costs and for the effort and inconveniences of child care. Thus, in the extended family, "there is no necessary implication that the husband must be 'able to support a wife and family' " (Davis, 1955:35). In the conjugal family, by contrast, the economies of scale in child production enjoyed by larger household units disappear, and costs can no longer be externalized and are shifted directly onto the parents (R. Freedman, 1963).

Second, the conjugal family involves an intensification of emotional attachments within the family. In the modern, impersonal setting, the conjugal family provides one of the few settings in which personal affective relations are maintained over long periods. In contrast, "popular marriage in former centuries was usually affectionless" (Shorter, 1975:55). Both husband-wife and parent-child relationships were intensified, as "the companionate aspect of marriage became emphasized over the reproductive aspect and the parent-child relationship shifted from one of exploitation in quantity to that of cultivation in quality" (United Nations, 1973:88). Aries considered this a major transformation, beginning around the seventeenth century, when the family "fell back upon the child, and its life became identified with the increasingly sentimental relationship between parents and children" (1962: 370). This aspect appears to parallel the rising aspirations factor, and in fact has one similar effect: parents make greater investments of money, time, and concern in their children. In the case of aspirations, however, the reason for this greater investment is the desire for a higher standard of living for one's children. In the present case, the reason is the emphasis on greater closeness to them and stronger emotional ties to them. The aspirations factor draws people out to compete, or to encourage their children to compete, in the wider world. The conjugal family factor draws them inward for emotional satisfactions.

As a result of the conjugal family's emergence and spread, parents should perceive the costs of children and the demands of childrearing (two separate disvalue clusters) to be heavier. As Shorter has succinctly put it: "Good mothering is an invention of modernization" (1975:55). The "reward" for this effort should be a greater sense of companionship with children and of the love they bring, or, in relation to our value classification, a greater prominence of the rewarding interactions cluster. Since the marital relationship also becomes more important, the effect of children on the marriage should become more salient.

Both negative effects, such as children generating more strain between husband and wife (which is in the last cluster, costs to social relationships), and positive effects, such as their cementing the marital bond (in the rewarding interactions cluster), should be more readily perceived.

Weakening cultural props

The last explanation is "cultural." Weakening cultural props for high fertility refer to the sanctions that the society, the community, and other large social groupings employ to encourage or discourage fertility. These sanctions may take the form of status or special honors awarded for large families, religious and ethical norms and standards, the imposition of traditional authority on the one hand and officially enunciated government policy on the other, as well as various social arrangements, such as inheritance laws, that encourage or discourage large families. The importance of the attitudes generated by religious and traditional sanctions is reflected in findings of apparent linguistic and religious barriers in the geographical spread of the fertility decline in Europe (Leasure, 1962; Knodel, 1974).

Sanctions attached to fertility have been considered props in the sense that, in traditional societies, they encourage the high fertility necessary to compensate for high mortality. They supplement or possibly override individual interests in children and replace these with social interests. Traditional societies are assumed to benefit from high fertility. Smaller social groups may equally benefit. The village is provided with more labor for food production and assured of continuity, the religious group is ensured of potential followers to indoctrinate, the corporate kin group is strengthened economically and militarily, and its life is projected into the future[5] (Lorimer, 1969). By contrast, social groups in modern societies may benefit less from high fertility. For instance, large numbers of children may make it difficult for families to acquire or accumulate land under conditions of growing pressure on resources (Demeny, 1968).

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5 One could discuss these benefits to the corporate kin group as an aspect of the emergence of the conjugal family, but I have chosen to discuss them here, in part because it is convenient to summarize external social pressures on couples' fertility decisions under the factor of weakening cultural props. There is also some substantive justification. It is not clear that parents in the extended family should have any greater desire to strengthen and perpetuate the group than parents in the conjugal family. They are, however, under more immediate and constant pressure from others in the household, so that the difference is a matter of the force of social sanctions and is more properly classified here.

Couples may be aware of such benefits or harm to their membership groups from children and act directly on that awareness. Or each group may attempt to provide rewards to influence couples' decisions. One important type of reward is social status, either in the form of recognition as a full member of the community (after one has borne children) or in the form of a higher position in the social hierarchy (after many children).

Government sanctions, whether in support of pronatalist or antinatalist policies, are a special type. Many government programs affect the other explanatory factors discussed above. The policies themselves, however, may have some coercive force, particularly when community networks are mobilized to support them. The "cultural" explanation may still be valid, however, even if government policies have little effect, because the core of this explanation has to do with the force of traditional norms and their gradual deterioration, rather than with the strength of the official modernizing policies that have difficulty displacing them.[6]

If the weakening of cultural props for fertility does explain the transition, we would expect pretransitional parents to perceive greater lineage or kin, religious, and social benefits in having children. We would also expect them to emphasize more strongly the status rewards from childbearing. All of these values fall in the instrumental assistance cluster. The significance of cultural norms would be further supported if posttransitional parents saw social costs and rewards of children that are in consonance with some widely accepted government policy. This would generally mean that couples should perceive overpopulation as a problem that children aggravate. Since popular acceptance of such policies cannot be assumed, however, the failure of this prediction need not invalidate the cultural explanation.

Summary of predictions

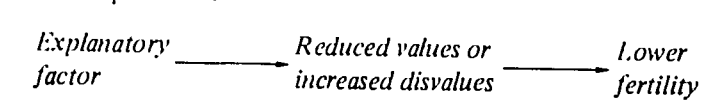
Table 2 may be referred to again for a summary of the predicted ef-

6 Should there be an additional cultural explanation having to do with traditional fatalism or irrationality in childbearing and the inability or inconceivability of planning one's family? Not necessarily, since this is already part of the contraceptive availability and efficiency factor, which covers not only contraceptive technology but also the basic idea that one can limit one's family. Traditional fatalism does not make consideration of demand factors irrelevant—various surveys show that even in relatively traditional settings most respondents can enunciate both advantages and disadvantages of children (Arnold and others, 1975)—though it may lead to more children than desired (which in turn may change desires because of the feedback effects of behavior on attitudes).

fects on values and disvalues of each factor in the fertility transition. It is conceivable that others would see different linkages, but the ones I have identified appear to be the most obvious and direct connections. They also cover all of the demand-related factors, as well as all of the value and disvalue categories. It has been possible to link each demand-related factor to some set of values or disvalues of children. For each of the categories of values and disvalues, on the other hand, a factor affecting it has been identified. It appears that the extant explanations for the fertility transition are comprehensive: at one time or another some author has focused on one or another value or disvalue category as the possible explanation for the fertility transition. The ambiguous effects of mortality reduction on costs and childrearing demands are not included among the predictions. Two of the effects in Table 2 (the effect of rising aspirations on psychological appreciation values and the effect of the emergence of the conjugal family on rewarding interactions values) actually increase the value of children, but it is assumed that these effects are overwhelmed by other effects of the same factors in the reverse direction, leading to lower fertility. Except for the effects of these two factors on the financial costs of children and on childrearing demands, each predicted effect has a unique source in one of the five factors. It should be possible, therefore, to distinguish which explanatory factors are more and which are less consistent with data on the value of children. In the unlikely event that none of them is consistent with the data, the other factors in Table 1 not involving demand for children would have to be taken as better explanations for the fertility transition.

In the remainder of this paper, I examine data on values and disvalues attached to children to determine which predictions are borne out, and which factors, therefore, are likely to have operated in the fertility transition. Because good survey data on the value of children in past times is not available, cross-sectional comparisons will be made between countries presumably at different stages in the fertility transition. Some subnational comparisons will also be made among regions within countries and among individuals whose differential fertility indicates that they may be at different stages in the transition.

The predictions to be tested do not involve any assumptions about the causal force of values and disvalues. The most obvious among possible causal sequences is:



However, if value change is a consequence rather than a cause of lower fertility, or a cause rather than a consequence of a particular explanatory factor, the predictions will still stand. All that the predictions say is that, for an explanatory factor to account for lower fertility, it must be associated with particular value changes, whether as a consequence of these changes, a direct cause of them, or an indirect cause of them.

In interpreting values and disvalues of children as reflections of the fertility transition, I am not looking for any single, overall measure of value, nor for any concept of total utility as applied to children. Although such concepts have been successfully applied in the past (e.g., Townes and others, 1976), they involve sophisticated psychological measurement inappropriate for large-scale surveys, are based on subjective value hierarchies that vary from person to person, and, as summary measures, probably tell one less about how values change than investigation of individual values does. I am interested not in whether the total net value of a child changes in the fertility transition—I assume it does—but in whether and in what way specific values and disvalues change. It is not the fact of a value-of-children transition but its specific nature that I seek to elucidate.

METHOD

On the basis of these predictions, the demand-related explanations for the fertility transition will be evaluated against synchronic survey data on the value of children from seven Asian countries and two Western countries. The countries are Indonesia, the Republic of Korea, the Philippines, Singapore, Taiwan, Thailand, Turkey, the United States, and West Germany. In each country, except West Germany, between 1,000 and 3,000 currently married women were interviewed in 1975 or 1976, as were a quarter to a half of all their husbands. The West German sample was smaller, consisting of about 300 married women with one child. Two samples, the West German and the Indonesian, were not nationally representative. The West German sample was drawn from the state of Bavaria, and in Indonesia the sample was limited to two ethnic groups, Javanese in Central Java and Sundanese in West Java. The remaining samples were designed to be nationally representative and did in fact cover many remote, traditional villages. Some samples excluded areas of insurgency, however. Table 3 summarizes the characteristics of each sample.

Comparisons of values and disvalues will be made across countries with different fertility levels. Longitudinal comparisons within countries would be preferable, but such data are not available. Using cross-

sectional comparisons to test longitudinal propositions requires the assumption that all of the countries are involved in the same basic fertility transition process, though the stages they have reached and the speed of their progress differ. The samples include three distinct groups of countries: (1) high-fertility countries, with crude birth rates (as of 1976) between 35 and 45 per thousand and gross reproduction rates (as of 1973) between 2.500 and 3.250; (2) moderate-fertility countries, with crude birth rates of 20 to 30 and GRRs of 1.250 to 2.000; and (3) low-fertility countries, with crude birth rates of 10 to 15 and GRRs of 0.750 to 1.000. In these comparisons, culture, history, ethnicity, and other factors that may have no intrinsic relation to stage in the fertility transition may obscure the differences among these groups or produce spurious ones. Turkey aside, all the high-fertility countries are Southeast Asian; those with moderate fertility are two East Asian countries (Korea and Taiwan) and Singapore, which has a Chinese majority; and the low-fertility countries are both Western. With the limited number of countries to be compared, it is not feasible to introduce other country-level variables as controls. To provide further tests of the hypotheses, therefore, additional comparisons will be made within countries.

First, the sampled cities and counties in Korea and regions in the Philippines will be contrasted. These two countries were chosen for reasons of convenience. It was possible to group respondents by sample area, and fertility estimates by area (total fertility rates calculated by the own-children method) were available from other sources.

Second, in each of the nine countries except West Germany two groups of respondents will be contrasted. Those with two or fewer living children who were limiting their families (i.e., who expressed the desire to have no additional children and who were besides using contraception) will be referred to as "low-parity limiters," and may be considered the prototypic posttransitional group. Those with five or more living children who did not indicate that they wanted fewer children and who were not limiting their families (i.e., they wanted more children or they were not using contraception, or both) will be referred to as "high-parity nonlimiters" and may be considered the prototypic pretransitional group. These definitions proved rather stringent: each group comprised a small proportion of each country sample, ranging from 1 to 23 percent (see Table 7). The size of the groups varied, as expected, with fertility level, except for Turkey, which had relatively fewer nonlimiters and more limiters than expected. Excluding other groups at intermediate parities and of less definite fertility

TABLE 3 Characteristics of samples

Country	Number in sample: Wives	Number in sample: Husbands	Sample coverage	Age criterion for wives[a]	Type of sample[b]: PPS or not	Type of sample[b]: No. of stages	Type of sample[b]: Major strata	Interviewing period
Indonesia (Javanese)	1,032	487	Javanese in Central Java only	Up to 39	No[c]	4	Urban, rural	Mar.–Apr. 1975
Indonesia (Sundanese)	1,002	496	Sundanese in West Java only	Up to 39	No[c]	4	Urban, rural	Mar.–Apr. 1975
Korea	1,565	490	National, excluding Cheju island and remote islands	Up to 39	No[d]	3	Seoul-Pusan, urban, rural	Jan. 1976
Philippines	1,691	382	National, excluding Western Mindanao and small islands	Up to 39	Yes	3	City of Manila, urban, rural	Sept.–Dec. 1975
Singapore	977	491	National	15–40	Yes	2	Urban govt. housing, other urban, suburban govt. housing, other suburban, rural	Oct. 1976–Mar. 1977
Taiwan	2,217	1,023	National, excluding aboriginal areas and remote islands	Up to 44	Yes	3	27 clusters of townships grouped by urbanization, education, and fertility	Jan.–Apr. 1976

Thailand	2,614	1,311	National, excluding four Muslim provinces and Northeast border areas	15–39	No[e]	4	Four regions, Bangkok	Apr.–May 1976
Turkey	1,760	545	National	Up to 39	No[d]	4	18 strata defined by urbanization and level of development	Aug.–Sept. 1975
United States	1,569	456	Coterminous U.S. excluding military reservations	15–39	Yes	4	74 groups of SMSAs and counties homogenous in pop., pop. in major city, etc.	Jan.–Apr. 1975
West Germany	296	0	Bavaria	Up to 32[f]	Yes	2	Cities, towns, villages	Sept.–Nov. 1976

PPS–probability proportional to size.

SMSA–standard metropolitan statistical area.

a For all samples, the female respondent had to be a currently married woman who met the age criterion and whose husband was living with her. (If the husband was temporarily absent, the total expected duration of absence was not to exceed six months.) The samples of husbands were chosen from among those whose wives were interviewed.

b All samples were stratified, multi-stage samples utilizing systematic random selection or simple random selection.

c Fixed numbers of units were selected at each stage.

d Each stratum had a different sampling fraction. Fractional weights were applied to keep the total number of respondents constant.

e Urban areas were overrepresented by a factor of two. Fractional weights were applied to keep the total number of respondents constant.

f Only women with one child were interviewed.

intentions should make it possible to observe value and disvalue differences in more "purified" form.

Of the three types of comparison, the comparisons across countries are the most important ones, since transition theory applies primarily to total societies.[7] Comparisons across individuals are often used in studies of the determinants of fertility, where many variables can be measured on samples of substantial size. Presumably a factor that reduces fertility levels in a society does not affect every potential childbearer equally and simultaneously but must, after it has begun to operate, produce fertility differentials at the individual level. If the factor operates only in the fertility transition (rather than being a relatively permanent cause of differentials), however, its influence will not be observed before it operates nor after its effect has been completely diffused. Individual comparisons, therefore, may reinforce cross-national comparisons, but the lack of individual contrasts at a particular stage in the transition does not negate the operation of a particular factor. The comparisons across communities would be essentially parallel to cross-national comparisons if the communities being compared were homogenous cultural entities with sharp boundaries, or essentially parallel to individual comparisons (except for the ecological effect) if the communities were essentially random groupings. Neither of these is the case for the Philippine and Korean sample areas being compared, so that these comparisons are intermediate between the other two types.

Some of the contrasts between countries and between sample areas will be described below as if they involved changes over time. What is meant, in each case, is that, from these cross-sectional contrasts, longitudinal changes are being inferred, in accordance with the previously stated assumption of a single basic fertility transition process that all countries have been, are, or will be implicated in.

The measures to be compared come from a uniform set of questions used in each of the surveys[8] about values and disvalues attached to children. Respondents answered open-ended questions on the advantages and disadvantages of having children, as opposed to not having children. Up to four answers were coded for each respondent by means of detailed coding schemes (Angeles, 1978), which were then

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7 As Ronald Freedman (1975:10) has written: "The problem is not why one couple rather than another is at a particular place in the frequency distribution of births in a society, but why the society as a whole has the particular fertility distribution that distinguishes it from another."

8 Some questions were omitted in the German study.

collapsed into the more general categories shown in the Exhibit. The problems of applying coding schemes across cultures are considerable (see, e.g., Whiting, 1968), and complete agreement on detailed categories is difficult to achieve. Nevertheless, the use of more general categories in this paper considerably increases the reliability of results.

Respondents also answered a variety of structured questions. They rated 19 values as very important, somewhat important, or not important reasons for having children. In addition they chose the most important and the second most important from among nine general life values and indicated whether these values were satisfied by having children. Separate questions determined whether they expected various types of economic or practical help from their sons or daughters. On still other questions respondents rated the importance of different costs of children. No questions are covered that deal with values and disvalues related to the desire for specific numbers of children. These will be treated elsewhere. Although it is change in values and disvalues specifically tied to number that should affect fertility, general values and disvalues should also show particular trends if the explanatory factors that have been discussed are in fact operative.

For most of the measures, percentages of respondents giving particular answers will be reported. For the ratings of reasons for having children, however, percentages appeared, on examination, to be inappropriate. In a set of attitude items of this sort, a halo effect often operates: respondents who wanted more children tended to rate all the reasons higher and respondents who wanted fewer children tended to rate all the reasons lower. To control for this effect and provide more meaningful comparisons consistent with the other measures, the mean rating across the 19 items was determined for each respondent, and deviations from this mean are reported instead.

As will be seen below, using ratings adjusted in this fashion produced results comparable to those from the open-ended advantages and disadvantages questions. Raw ratings, on the other hand, generally did not show interpretable patterns. The use of adjusted ratings may be justified, from a theoretical perspective, by the focus in this paper on changes in the emphases given to different values rather than on changes in the global net value of children. As relative rather than absolute measures, the adjusted ratings are consistent with this focus.

The open-ended questions about advantages and disadvantages of children also provide relative rather than absolute measures. They force comparisons between values, because some responses, but not more than a few, are usually expected by the interviewer and can

ordinarily be recorded to each question. The number of responses an individual gives varies within a narrow range, because the survey method demands some answer but does not facilitate unlimited probing. The values mentioned are presumably those most salient to the respondent, but degree of salience cannot be equated across respondents. It may be more generally true that, in making wide-ranging cross-cultural comparisons across groups who do attach some positive utility to having children, it is easier and more meaningful to compare the most prominent values that different individuals attach to children than to attempt to quantify a net value for each individual.

FINDINGS

The different value and disvalue measures will be discussed not by type of question but in the order of the hypotheses about the fertility transition to which they relate. I will consider in order values relevant to the hypothesis of vanishing economic roles for children, values relating to the hypothesis of rising aspirations, values involved in the hypothesis of the emergence of the conjugal family, values relevant to the cultural props hypothesis, and finally values reflecting on the mortality reduction hypothesis.

Vanishing economic roles for children

Prediction E1, that economic benefits from children should decrease, was clearly supported by the data on advantages of children (Table 4). Three values—help in housework, help in old age, and financial and practical help—declined in salience across countries as fertility fell. Data for wives and for husbands showed parallel declines. Help in housework was sharply lower in Turkey and Thailand than in the Philippines and Indonesia, and it slipped slightly lower still in the moderate- and low-fertility countries. By contrast, help in old age declined slightly in salience between high-fertility and moderate-fertility countries, but declined much more sharply between moderate-fertility and low-fertility countries. The salience of financial and practical help declined more uniformly from high- to moderate- to low-fertility countries, the case of Turkey being the exception.

Among the rated reasons for having children, two involved economic contributions: to work and help and to depend on when old. Both declined in importance across countries. To work and help received positive ratings in the high-fertility countries, negative ratings (i.e., ratings below the mean for all values) in moderate-fertility countries, and even more negative ratings in low-fertility countries. To de-

TABLE 4 Indicators of children's economic roles, by country and sex of respondents: 1975–76

Indicator	Country (crude birth rate, 1976[a])								
	Philippines (41)	Turkey (39)	Indonesia (38)	Thailand (36)	Korea (29)	Taiwan (23)	Singapore (20)	United States (13)	West Germany (10)
WIVES									
Percentage mentioning advantages									
Help in housework	35	11	33	9	3	4	9	3	0
Help in old age	44	43	60	27	23	30	41	7	10
Financial, practical help	49	22	53	54	26	17	13	2	1
Ratings[b] of reasons for having children									
To work and help	.11	.06	.06	.04	−.31	−.25	−.18	−.50	−.37
To depend on when old	.20	.24	.13	.31	.08	.14	.30	−.48	−.41
Percentage expecting help from sons									
Help around house	83	65	81	73	82	68	39	85	na
Support in old age	86	93	82	89	85	85	39	12	na
Part of salary	67	77	60	71	71	76	38	29	na
Contribution in emergencies	88	95	83	92	87	92	58	74	na
Support for siblings' schooling	84	87	81	86	65	83	44	13	na
Percentage expecting help from daughters									
Help around house	94	94	92	96	84	82	55	92	na
Support in old age	85	81	77	87	46	39	31	11	na
Part of salary	68	60	56	68	59	72	32	29	na
Contribution in emergencies	88	85	81	89	75	88	49	73	na
Support for siblings' schooling	84	76	72	83	59	79	39	13	na
(Number of respondents[c])	(1,691)	(1,760)	(2,034)	(2,614)	(1,565)	(2,217)	(977)	(1,569)	(296)
HUSBANDS									
Percentage mentioning advantages									
Help in housework	31	8	16	7	2	3	4	2	na
Help in old age	39	44	48	28	20	30	36	8	na
Financial, practical help	53	23	56	51	22	22	11	4	na

TABLE 4 *(continued)*

Indicator	Country (crude birth rate, 1976[a])								
	Philippines (41)	Turkey (39)	Indonesia (38)	Thailand (36)	Korea (29)	Taiwan (23)	Singapore (20)	United States (13)	West Germany (10)
HUSBANDS *(continued)*									
Ratings[b] of reasons for having children									
To work and help	.10	−.04	.05	.06	−.27	−.30	−.31	−.46	na
To depend on when old	.17	.24	.11	.28	−.13	.07	.25	−.51	na
Percentage expecting help from sons									
Help around house	86	80	89	73	82	67	33	87	na
Support in old age	82	88	82	78	79	76	31	12	na
Part of salary	61	67	52	53	63	62	29	19	na
Contribution in emergencies	85	88	81	87	81	86	49	66	na
Support for siblings' schooling	83	87	81	82	60	79	35	16	na
Percentage expecting help from daughters									
Help around house	92	91	93	92	80	79	48	90	na
Support in old age	80	67	81	75	43	29	25	11	na
Part of salary	61	27	50	49	42	57	24	18	na
Contribution in emergencies	84	62	80	84	66	80	43	65	na
Support for siblings' schooling	80	67	80	77	52	74	31	15	na
(Number of respondents[c])	(382)	(545)	(983)	(1,311)	(490)	(1,023)	(491)	(456)	(0)

na—not applicable to West German sample.

a Source of crude birth rates: Population Reference Bureau (1976).

b Deviations from the mean rating assigned by each individual to all 19 reasons. Original ratings were on a scale from 1 (not important) to 3 (very important).

c Because of missing data, some percentages and means are based on slightly fewer respondents.

pend on when old received positive ratings in high and moderate-fertility countries, and strongly negative ratings in low-fertility countries.

Expectations of help from sons and daughters also showed declines. An average of about 80 percent of respondents expected each type of help in the high-fertility countries. This dropped to about 75 percent in Korea and Taiwan and only 40 percent in Singapore. In the United States, the average was also about 40 percent. (These questions were not asked in West Germany.) For specific expectations, the usual pattern was for proportions expecting that type of help from children to be sharply lower in the two lowest-fertility countries, Singapore and the United States. This was true for expecting children to contribute part of their salary to the household and for expecting them to support younger siblings through school. It was also true for expecting sons to provide support in old age, but expecting daughters to provide support in old age was lower not only in these two countries but also in the other moderate-fertility countries. For expecting help from children in emergencies, the pattern also held, except that the proportions were higher in the United States than in Singapore. For expecting help in housework, the pattern was different: some decline for moderate-fertility countries, but a subsequent rise in the United States.[9]

Similar declines appeared across Philippine regions (Table 5) and Korean cities and counties (Table 6). Overall, the economic benefits expected from children were less salient among the advantages of children in Korea than in the Philippines, and in both countries they were less salient in areas of lower fertility. Help in housework was mentioned by 49 percent of wives in Bicol (which had the highest fertility among the Philippine regions contrasted), but by only 12 percent in Manila, by 11 percent in Hongchon county (with the highest fertility among the Korean sample areas), but by 0 percent in Seoul. The declines were not smooth from the highest to the lowest fertility level, however. Help in housework was about equally salient for most Philippine regions, dropping sharply only for the two most developed regions. In Korea this value dropped sharply after Hongchon, and then stayed constant at a low level. This finding agrees with the cross-national pattern of declines in the salience of household help mainly between high and moderate fertility levels. For husbands, the declines

9 One might also note, in this table, the differences in expectations of help from sons and from daughters, especially in Korea, Taiwan, and Turkey. Moreover, there were systematic differences between wives and husbands: on the average across countries, the wives expecting help were over 5 percentage points more than the husbands expecting help.

TABLE 5 Indicators of children's economic roles, by region and sex of respondents: Philippines, 1975–76

Indicator	Region (total fertility rate, 1968[a])									
	Bicol (7,015)	Min-danao (6,543)	East Visayas (6,348)	Central Luzon (6,126)	Cagayan (6,058)	West Visayas (5,929)	Central Visayas (5,338)	Ilocos (5,243)	South-ern Tagalog (5,175)	City of Manila (3,349)
WIVES										
Percentage mentioning advantages										
Help in housework	49	45	49	31	46	33	56	43	21	12
Help in old age	51	17	41	41	23	45	34	44	55	67
Financial, practical help	51	43	59	56	62	54	52	60	42	33
Ratings for reasons for having children										
To work and help	.11	.18	.21	.07	.17	.08	.16	.25	.09	−.07
To depend on when old	.21	.23	.30	.18	.22	.21	.27	.37	.15	.14
Percentage expecting help from sons										
Help around house	85	82	88	81	85	95	89	84	77	67
Support in old age	86	75	99	83	92	93	94	90	83	63
Part of salary	71	58	74	72	77	72	82	73	57	43
Contribution in emergencies	91	72	84	91	93	85	93	97	89	82
Support for siblings' schooling	85	70	84	90	86	90	88	92	80	78
Percentage expecting help from daughters										
Help around house	93	90	100	95	95	93	98	96	93	88
Support in old age	82	72	99	83	88	93	93	91	82	71
Part of salary	67	56	68	73	80	77	83	81	60	47
Contribution in emergencies	90	69	88	93	92	87	92	99	88	86

Support for siblings' schooling	82	72	99	83	88	93	93	91	82	71
(Number of respondents)	(130)	(125)	(69)	(201)	(84)	(239)	(172)	(77)	(545)	(49)
HUSBANDS										
Percentage mentioning advantages										
Help in housework	47	31	39	24	55	35	61	50	13	8
Help in old age	59	21	39	29	32	35	28	8	53	42
Financial, practical help	41	52	54	45	45	65	53	75	53	17
Ratings for reasons for having children										
To work and help	−.01	.13	.29	.00	.22	.05	.17	.27	.12	−.08
To depend on when old	.20	.06	.29	.05	.26	.21	.36	.27	.14	−.25
Percentage expecting help from sons										
Help around house	91	69	100	87	100	99	86	100	77	67
Support in old age	82	69	100	76	73	94	92	83	79	42
Part of salary	71	52	77	50	59	78	69	83	52	17
Contribution in emergencies	79	62	100	87	95	91	86	92	85	67
Support for siblings' schooling	85	59	100	92	86	93	81	92	80	67
Percentage expecting help from daughters										
Help around house	100	79	100	92	95	96	86	100	92	75
Support in old age	82	65	100	68	73	94	83	83	79	50
Part of salary	68	45	85	50	68	75	69	83	53	17
Contribution in emergencies	82	59	100	84	91	88	83	100	85	67
Support for siblings' schooling	82	65	100	68	73	94	83	83	79	50
(Number of respondents)	(34)	(29)	(13)	(38)	(22)	(69)	(36)	(12)	(117)	(12)

a Calculated by Robert Retherford and others using the own-children method and data from the 1973 National Demographic Survey (personal communication).

TABLE 6 Indicators of children's economic roles, by sample area and sex of respondents: Korea, 1976

Indicator	City or county (total fertility rate, 1974[a])									
	Hong-chon (4,873)	Sosan (4,417)	Naju (4,080)	Jonju (3,728)	Jinju (3,707)	Chang-nyong (3,637)	Seong-nam (3,518)	Pusan (2,846)	Daegu (2,578)	Seoul (2,347)
WIVES										
Percentage mentioning advantages										
Help in housework	11	2	1	5	1	4	1	1	2	0
Help in old age	30	27	45	34	28	29	17	12	15	10
Financial, practical help	15	28	21	41	29	19	44	20	17	27
Ratings for reasons for having children										
To work and help	−.12	−.36	−.04	−.28	−.20	−.08	−.45	−.47	−.38	−.41
To depend on when old	.37	.12	.31	.19	.22	.33	−.04	−.18	−.04	−.10
Percentage expecting help from sons										
Help around house	81	80	81	82	82	86	84	86	77	83
Support in old age	82	87	93	86	87	89	88	84	74	83
Part of salary	68	67	88	63	68	74	75	75	62	70
Contribution in emergencies	79	89	91	89	84	89	90	96	78	86
Support for siblings' schooling	63	65	84	65	62	74	69	60	52	58
Percentage expecting help from daughters										
Help around house	84	84	83	82	91	79	91	87	73	86
Support in old age	38	51	52	36	44	42	55	54	38	45
Part of salary	50	60	68	47	63	57	61	62	47	65
Contribution in emergencies	56	79	84	72	82	65	83	81	73	77
Support for siblings' schooling	59	64	62	50	62	59	58	55	45	57
(Number of respondents[b])	(95)	(269)	(77)	(125)	(143)	(143)	(146)	(103)	(146)	(318)

HUSBANDS										
Percentage mentioning advantages										
Help in housework	7	3	3	0	0	3	2	0	3	1
Help in old age	37	18	29	33	21	27	19	14	18	9
Financial, practical help	26	23	18	27	28	19	27	27	13	22
Ratings for reasons for having children										
To work and help	−.23	−.25	−.22	−.16	−.19	.04	−.46	−.31	−.17	−.40
To depend on when old	.15	−.04	.37	−.01	.08	.24	−.17	−.42	−.27	−.54
Percentage expecting help from sons										
Help around house	86	82	65	87	79	93	85	86	64	85
Support in old age	86	80	91	69	86	90	67	73	64	77
Part of salary	70	64	73	57	55	73	58	64	56	60
Contribution in emergencies	86	85	79	74	79	83	79	86	67	79
Support for siblings' schooling	76	66	71	50	52	73	60	59	44	49
Percentage expecting help from daughters										
Help around house	93	84	79	70	79	71	87	82	64	79
Support in old age	48	51	41	33	31	39	33	50	41	41
Part of salary	41	51	38	30	41	46	23	55	33	43
Contribution in emergencies	69	71	59	73	69	68	63	82	46	63
Support for siblings' schooling	55	63	62	43	45	54	46	50	31	48
(Number of respondents[b])	(29)	(89)	(34)	(40)	(29)	(41)	(48)	(22)	(39)	(119)

a Calculated by Robert Retherford and others using the own-children method and 1975 census data (personal communication).

b Unweighted. Since the weights for all respondents of a given sex in each city or county are identical, percentages and means are not affected by weighting.

TABLE 7 Indicators of children's economic roles among high-parity 1975–76

Indicator	Philippines		Turkey		Indonesia	
	HPN	LPL	HPN	LPL	HPN	LPL
WIVES						
Percentage mentioning advantages						
Help in housework	48	21	5	5	40	41
Help in old age	40	45	54	41	60	38
Financial, practical help	63	40	31	11	56	71
Ratings of reasons for having children						
To work and help	.14	.06	.38	−.36	.09	.07
To depend on when old	.17	.13	.29	.21	.14	.13
Percentage expecting help from sons						
Help around house	89	78	80	45	83	73
Support in old age	93	86	100	74	78	79
Part of salary	82	55	85	45	58	74
Contribution in emergencies	92	80	98	89	82	82
Support for siblings' schooling	93	77	100	68	82	88
Percentage expecting help from daughters						
Help around house	95	95	97	91	90	94
Support in old age	92	87	92	63	73	79
Part of salary	82	60	75	40	57	71
Contribution in emergencies	92	81	92	80	82	82
Support for siblings' schooling	92	83	97	63	79	76
(Number of respondents)	(182)	(92)	(59)	(141)	(260)	(34)
(Respondents as percentage of sample)	(11)	(5)	(3)	(8)	(13)	(2)
HUSBANDS						
Percentage mentioning advantages						
Help in housework	41	7	4	1	18	28
Help in old age	46	50	47	25	45	67
Financial, practical help	66	43	19	16	59	39
Ratings of reasons for having children						
To work and help	.12	.12	.23	−.27	.10	.06
To depend on when old	.12	.18	.44	.18	.14	.12

nonlimiters and low-parity limiters, by country and sex of respondents:

Thailand		Korea		Taiwan		Singapore		United States	
HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL
14	5	13	0	5	1	18	8	6	2
19	26	49	10	31	19	41	27	11	6
70	41	8	33	24	14	23	4	6	3
.19	−.02	−.14	−.41	.02	−.58	.22	−.41	−.49	−.48
.28	.33	.54	−.23	.19	−.03	.51	.14	−.52	−.49
88	66	90	81	75	52	52	27	83	83
97	86	100	81	97	67	43	26	23	10
87	62	85	69	97	65	57	22	53	28
98	89	90	89	97	90	68	41	78	75
97	76	74	60	97	71	57	27	22	11
99	95	84	85	87	65	66	39	100	90
93	84	37	46	47	43	23	20	23	10
83	60	49	47	93	61	39	20	56	28
95	88	64	77	93	86	50	34	78	73
94	75	67	49	92	66	41	25	17	11
(160)	(179)	(40)	(141)	(60)	(160)	(44)	(140)	(18)	(327)
(6)	(7)	(3)	(9)	(3)	(7)	(5)	(14)	(1)	(21)
8	9	10	3	5	0	6	3	0	2
24	28	47	18	40	14	53	27	25	4
63	39	16	25	5	26	23	10	0	4
.13	.01	−.28	−.50	−.12	−.42	−.09	−.54	−.69	−.46
.25	.27	.03	−.37	.28	−.18	.19	.16	−.69	−.41

TABLE 7 *(continued)*

Indicator	Philippines		Turkey		Indonesia	
	HPN	LPL	HPN	LPL	HPN	LPL
HUSBANDS *(continued)*						
Percentage expecting help from sons						
Help around house	88	87	98	76	89	78
Support in old age	95	73	100	82	84	89
Part of salary	76	47	62	40	55	72
Contribution in emergencies	88	67	100	83	86	89
Support for siblings' schooling	90	53	100	71	82	88
Percentage expecting help from daughters						
Help around house	95	87	100	95	93	89
Support in old age	93	80	71	65	83	89
Part of salary	75	47	21	21	53	78
Contribution in emergencies	85	73	48	58	85	89
Support for siblings' schooling	87	53	23	51	80	88
(Number of respondents)	(41)	(15)	(20)	(36)	(134)	(18)
(Respondents as percentage of sample)	(11)	(4)	(4)	(7)	(14)	(2)

HPN—high-parity nonlimiters.
LPL—low-parity limiters.

were parallel. Help in old age showed a tendency to rise instead of falling at the lowest fertility levels in the Philippines, but a more predictable decline was seen across Korean sample areas: the proportion of wives mentioning this value ranged from 45 to 27 percent in the six higher-fertility areas, and from 17 to 10 percent in the four lower-fertility areas. (Korean husbands showed a corresponding pattern.) These patterns are, again, consistent with the cross-national pattern of declines in the salience of old-age help between moderate and low fertility levels. Salience of the third related value, financial and practical help, was more consistent with predictions for the Philippines, where it declined for Manila, than for Korea, where little pattern could be discerned.

On the structured questions, the patterns were also supportive of the predictions. In the Philippine sample, the two economic reasons for having children did not vary consistently across most of the re-

Thailand		Korea		Taiwan		Singapore		United States	
HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL
85	75	83	76	80	57	28	27	83	83
92	66	94	69	95	57	44	18	23	10
79	39	89	55	90	37	17	22	53	28
98	79	94	79	100	75	67	30	78	75
93	79	100	49	100	64	44	21	22	11
99	91	94	81	70	70	67	35	100	90
92	65	63	38	30	26	28	15	23	10
75	34	77	35	85	31	6	21	56	28
97	75	73	61	85	69	61	29	78	73
91	71	89	47	90	55	44	21	17	11
(92)	(101)	(12)	(47)	(20)	(84)	(18)	(68)	(8)	(103)
(7)	(8)	(2)	(10)	(2)	(8)	(4)	(14)	(2)	(23)

gions, but dropped in importance for the metropolitan Manila area. In the Korean sample, these two reasons received lower importance ratings in the four lowest-fertility sample areas. The line, in both countries, appeared to be drawn between larger urban areas, where these economic reasons were discounted, and all other areas, where these economic reasons still held sway.

In regard to expectations of help from children, Manila residents generally had the fewest expectations, though expectations were also relatively low in Eastern Mindanao. Expectations in Korea were at roughly the same level as in the Philippines for sons, but at a lower level for daughters. Among the Korean cities and counties, expectations were lowest in Daegu, with the second lowest fertility level, and slightly higher in Seoul, with the lowest fertility level.

Across individuals, Prediction E1 also stood up fairly well (Table 7). Percentage differences on the open-ended question between high-parity

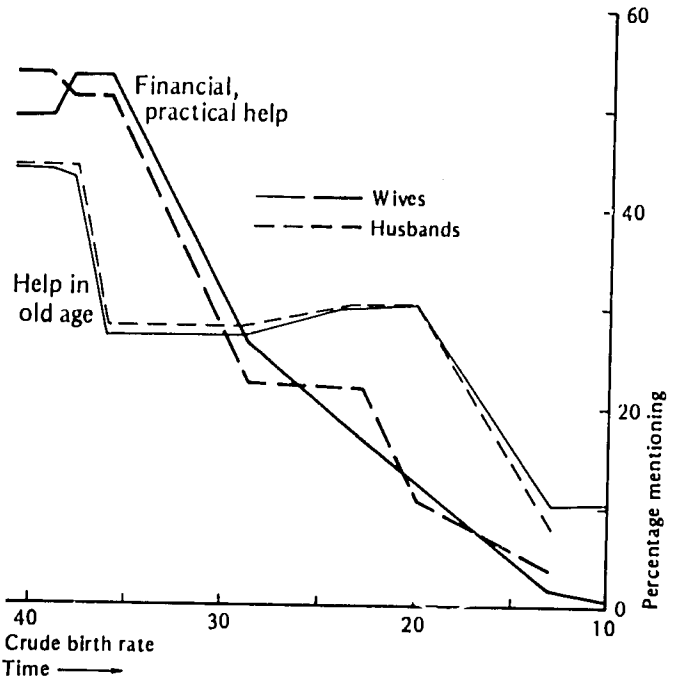
nonlimiters and low-parity limiters were interpreted only if they reached or exceeded 10 percentage points. Most of the differences—and some of them were quite large, exceeding 30 percentage points—were in the expected direction, high-parity nonlimiters mentioning more economic benefits than low-parity limiters. The differences were most consistent for financial and practical help (the low-fertility United States being one of the exceptions), than for help in old age (where differences were striking in the moderate-fertility countries and Turkey), and least for help in housework (where only the Philippines showed differences for both wives and husbands).

On the structured measures, a striking difference was observed in the moderate-fertility countries: limiters rated the two economic reasons for having children considerably less important than did nonlimiters. This was partly true also in Turkey and Thailand. In regard to expectations of help, confirmatory differences exceeding 10 percentage points (limiters expecting less help than nonlimiters) appeared in the majority of comparisons in each country, Indonesia being the only exception. The specific types of help expected that distinguished limiters and nonlimiters varied by country, by sex of child, and by sex of respondent. Distinctions were slightly more common, overall, on expecting children to contribute part of their salary to the household, on expecting them to support siblings through school, and on expecting support in old age, and slightly less common on expecting contributions in emergencies and expecting help around the house.

Overall, therefore, Prediction E1 had excellent support, and the idea that vanishing economic roles for children is a factor in the fertility transition was consistent with the data. This positive result can be readily portrayed in a way that glosses over some of the inconsistencies in the data. Figure 1 charts the salience, on the advantages question, of two of the values, help in old age and financial and practical help, across countries as fertility falls. What have been plotted are not the actual percentages but smoothed figures, obtained by repeatedly taking medians of every three successive values, with a special technique applied to end points (Tukey, 1977:210–23). The decline in the salience of economic benefits thus appears sharply delineated.

The data also suggested that particular economic benefits decline in a specific pattern. Help in housework appears to decline earliest and, when moderate fertility levels are reached, has little further room to decline. Help in old age does not decline substantially until the transition from moderate to low fertility levels begins. Financial and practical help, finally, declines continuously. The ability of each value to

FIGURE 1 Salience of help in old age and financial, practical help by fertility level, after smoothing



NOTE: Smoothing involved repeatedly taking medians of three successive values (Tukey, 1977:210–23).

distinguish individuals with a high-fertility pattern from individuals with a low-fertility pattern can be deduced from the timing of these declines. Financial and practical help differentiated these groups in high-fertility and moderate-fertility countries, help in old age was differentiating in moderate-fertility countries, and help in housework had some capacity to differentiate mainly in high-fertility countries. These patterns were more evident with the general questions than with questions about specific types of help expected.

Rising aspirations

Rising aspirations among parents should be reflected in four types of value changes: increased concern with the restrictions children impose on their parents, as the parents' extrafamilial involvements broaden; more awareness of the psychological benefits of having children, such

as the opportunities for self-fulfillment and for satisfying new aspirations to achievement and power through children; greater importance being attached to the financial costs, as parents' aspirations for the children themselves rise; and greater importance being attached to the demands of childrearing, as parents attempt to do more for their children. Data relevant to each type of value change will be considered.

Restrictions on parents. Prediction P6 says that, because of rising aspirations, restrictions on parents should be more salient at lower fertility levels. Two disvalues among the disadvantages of children are relevant, one having to do with work restrictions and the other a catchall for social, personal, and other restrictions: that children tie one down. Work restrictions were less salient, in every case, than the broad idea of being tied down (Table 8). Among husbands, work restrictions hardly varied in salience. But among wives, for whom work restrictions were higher in salience, they increased in salience at the low-fertility end. Being tied down, on the other hand, increased in salience from high- to moderate-fertility countries, and then increased even more sharply from moderate- to low-fertility countries. The large differences in perceived restrictions appeared, therefore, at the low end of the fertility continuum.

To further determine sensitivity to restrictions, respondents were asked: "Would you say that having children prevents/would prevent you from doing other things you want to do very often, sometimes, or not at all?" About 70 percent of wives and about 50 percent of husbands chose "very often" or "sometimes." West German wives and U.S. husbands were only slightly more likely than other wives and husbands to reply that children did interfere with other things. Unlike answers to the disadvantages question, the responses to this question provided at best minimal support for the prediction of increasing restrictions with lower fertility. It was observed, however, that some respondents, in replying to this question, had in mind children interfering with housework, which is a disvalue of children that should be distinguished from restrictions on enjoyable or personally satisfying activities (and was classified elsewhere in the coding scheme used). A way to identify these respondents was a follow-up question that asked what things children interfere with. Responses to the follow-up question were coded according to the scheme used for disadvantages of children. Those respondents who specifically mentioned a sense of being tied down (including specific personal or social restrictions) and inability to work were counted. The percentages for being tied down

appeared in accord with the prediction, being sharply higher in the two low-fertility countries, though also somewhat high in Turkey. The percentages for work restrictions showed no clear trend. These results were essentially identical to results obtained from the disadvantages question.

Across Philippine regions (Table 9), perceived restrictions on the disadvantages question actually appeared to fall slightly. Work restrictions were not mentioned at all by Manila respondents, and being tied down was least salient, among wives, in Manila (though it was quite salient among husbands). For Korean cities and counties (Table 10), the salience of restrictions showed no linear pattern. Responses to the structured question also failed to show the expected trends, as did responses to the follow-up question. If restrictions do increase in salience only at low fertility levels, the absence of supporting trends across Philippine and Korean areas need not be taken as discouraging.

The nonlimiter-limiter comparisons, by contrast, led to confirmatory results (Table 11). Work restrictions, because they were generally so low in salience on the disadvantages question, did not produce large differences. But the other disvalue, being tied down, differentiated limiters and nonlimiters neatly for both wives and husbands at moderate and low fertility levels, as well as in Turkey—limiters mentioning these restrictions more often—but not in the other high-fertility countries. The structured question too separated nonlimiters and limiters, though mainly among wives rather than husbands. In Turkey, Singapore, and the United States, limiter wives more often agreed that children prevented their doing other things than nonlimiter wives. In all countries except Indonesia and the Philippines, more limiter wives mentioned being tied down. Restrictions on work, however, seemed to operate in the reverse direction, wherever they made any difference.

An alternate measure of the restrictions children impose is children's failure to satisfy values a person considers important in life. One might seek other sources of value satisfaction, which, given limitations on time and resources, would eventually compete with having children. Respondents indicated whether children would or would not satisfy the values they chose as most and second most important out of a list of nine general values (Tables 8 to 11). The percentages who said children would not provide value satisfaction were clearly higher (between 20 and 43 percent) in Singapore and the United States, at the low-fertility end, than in the other countries, where the figures ranged from 3 to 16 percent. Across sample areas in the Philippines and Korea, however, no trends were evident. Between nonlimiter and limiter husbands

TABLE 8 Indicators of rising aspirations, by country and sex: 1975–76

Indicator	Philippines	Turkey	Indonesia	Thailand	Korea	Taiwan	Singapore	United States	West Germany
WIVES									
Percentage mentioning disadvantages									
Tied down	7	11	15	6	26	15	30	68	80
Can't work	3	4	3	6	3	1	8	8	14
Percentage saying children prevent their doing other things	74	73	69	74	66	79	59	71	89
Percentage[a] mentioning being tied down	14	72	57	13[b]	38	24	60	87	129
Percentage[a] mentioning work restrictions	19	27	11	30[b]	25	44	21	15	12
Percentage saying children do not satisfy their									
Most important life-value	8	12	8	8	9	6	30	20	na
Second most important life-value	4	12	6	7	10	6	21	23	na
Percentage mentioning advantages									
Living through children	4	2	6	2	6	2	1	8	7
Achievement, power	5	10	2	1	33	6	4	40	14
Character, responsibility	2	0	0	1	1	0	1	4	10
Incentive to succeed	4	1	2	1	3	1	6	0	0
Fulfillment	1	4	0	0	7	4	4	33	36
Ratings of reasons for having children									
To be remembered	.01	.05	−.16	−.08	−.18	−.11	−.48	−.50	−.56
To make you proud	.01	−.10	.00	.08	.05	−.05	−.18	.31	.14
To do something	−.14	−.28	.01	u	.28	.03	−.21	.29	.81
To watch them grow	.06	.01	−.01	.12	.30	.14	−.02	.85	.27
To look up to you	−.25	−.20	.13	.12	−.33	.02	−.14	−.25	−.04
To be a better person	.03	−.22	−.18	−.05	−.27	−.37	−.57	.00	−.54

HUSBANDS									
Percentage mentioning disadvantages									
Tied down	7	9	7	3	18	9	19	59	na
Can't work	2	3	1	3	1	0	3	1	na
Percentage saying children prevent their doing other things	65	51	45	60	43	38	21	70	na
Percentage[a] mentioning being tied down	17	34	15	7[b]	25	19	22	96	na
Percentage[a] mentioning work restrictions	24	27	29	14[b]	9	22	4	3	na
Percentage saying children do not satisfy their									
Most important life-value	6	13	10	8	12	9	43	25	na
Second most important life-value	3	13	6	7	14	10	26	27	na
Percentage mentioning advantages									
Living through children	4	3	9	2	10	4	3	12	na
Achievement, power	3	10	2	1	36	4	4	36	na
Character, responsibility	2	0	1	2	4	1	3	2	na
Incentive to succeed	7	3	6	2	3	3	6	5	na
Fulfillment	3	5	0	1	8	5	3	21	na
Ratings of reasons for having children									
To be remembered	.02	.10	−.09	−.10	−.16	−.10	−.58	−.42	na
To make you proud	.05	.09	−.00	.11	.05	−.08	−.14	.41	na
To do something	−.11	−.27	−.00	u	.30	.07	−.15	.22	na
To watch them grow	.07	−.05	−.00	.15	.38	.15	−.06	.82	na
To look up to you	−.24	−.04	.14	.12	−.25	−.01	−.08	−.17	na
To be a better person	.06	−.07	−.10	.03	−.31	−.36	−.42	.11	na

na—not applicable to West German sample. u—unavailable.

a Bases for percentages included those who said children did not prevent their doing other things. Multiple responses were coded. The tabulation program used (SPSS) counted two responses coded in the same category once each, even if both were from the same person, which explains why percentages may exceed those in the preceding row or may exceed 100.

b Few Thai respondents answered this follow-up question, making these percentages artificially low. (Those who said children prevent some things but did not specify what they were were counted as missing, whereas those who said children do not prevent other things were not counted as missing.) If the percentages were adjusted for nonresponse, they would become 21 and 51 for wives and 20 and 43 for husbands.

TABLE 9 Indicators of rising aspirations, by region and sex: Philippines, 1975

Indicator	Bicol	Min-danao	East Visayas	Central Luzon	Cagayan	West Visayas	Central Visayas	Ilocos	South-ern Tagalog	City of Manila
WIVES										
Percentage mentioning disadvantages										
Tied down	5	7	4	3	24	9	12	5	3	2
Can't work	3	0	6	2	8	4	5	1	1	0
Percentage saying children prevent their doing other things	84	89	71	71	74	81	88	88	62	59
Percentage mentioning being tied down	9	8	3	13	49	23	18	34	5	2
Percentage mentioning work restrictions	20	32	34	16	24	30	30	15	7	4
Percentage saying children do not satisfy their										
Most important life-value	3	8	9	9	17	12	11	3	4	11
Second most important life-value	5	6	5	5	9	5	4	0	2	9
Percentage mentioning advantages										
Living through children	4	5	5	4	1	5	6	7	2	4
Achievement, power	4	7	8	3	6	5	8	3	6	4
Character, responsibility	0	2	0	4	1	3	1	0	2	0
Incentive to succeed	5	9	3	5	5	4	6	0	4	0
Fulfillment	1	1	0	3	0	0	0	0	2	4
Ratings of reasons for having children										
To be remembered	−.01	.07	.04	−.00	.20	−.01	.05	.12	−.04	.02
To make you proud	−.03	−.01	−.55	−.02	.04	.03	.03	−.06	.09	.14
To do something	−.16	−.13	−.23	−.07	−.27	−.14	−.23	−.21	−.12	.01
To watch them grow	.05	−.02	−.05	.11	.02	.05	.01	.03	.11	.18
To look up to you	−.22	−.01	−.18	−.17	.20	.10	.03	.11	−.67	−.60
To be a better person	.10	.19	−.05	.02	−.04	−.09	.02	.15	.03	−.05

HUSBANDS										
Percentage mentioning disadvantages										
Tied down	6	4	8	6	5	10	8	0	4	25
Can't work	0	4	8	0	5	3	3	8	1	0
Percentage saying children prevent their doing other things	65	89	61	64	95	68	81	67	52	0
Percentage mentioning being tied down	18	21	0	9	81	19	17	25	6	0
Percentage mentioning work restrictions	32	64	25	14	19	21	56	33	10	0
Percentage saying children do not satisfy their										
Most important life-value	4	4	0	0	10	11	6	0	6	9
Second most important life-value	5	0	0	0	5	5	3	0	4	0
Percentage mentioning advantages										
Living through children	0	3	0	11	9	1	14	0	2	0
Achievement, power	3	7	0	3	5	1	6	0	4	0
Character, responsibility	0	3	8	3	0	4	0	8	0	17
Incentive to succeed	6	14	23	5	0	3	3	0	8	17
Fulfillment	3	3	0	0	5	1	6	8	3	0
Ratings of reasons for having children										
To be remembered	−.01	−.07	.21	.03	.02	−.01	.14	.25	−.00	−.25
To make you proud	−.01	.06	−.40	.08	−.11	.08	.06	−.27	.10	.33
To do something	−.01	−.18	−.40	.00	−.17	−.09	−.19	−.25	−.10	−.08
To watch them grow	.05	−.01	−.02	.19	.07	.01	−.05	.17	.09	.33
To look up to you	−.10	−.07	−.25	−.18	.16	.01	−.11	.08	−.63	−.42
To be a better person	.20	.20	.14	.13	.02	.02	.09	.08	.03	−.33

TABLE 10 Indicators of rising aspirations, by sample area and sex: Korea, 1976

Indicator	Hong-chon	Sosan	Naju	Jonju	Jinju	Chang-nyong	Seong-nam	Pusan	Daegu	Seoul
WIVES										
Percentage mentioning disadvantages										
Tied down	17	28	20	47	11	23	27	36	19	26
Can't work	1	2	5	4	5	4	7	1	1	3
Percentage saying children prevent their doing other things	54	63	73	74	64	59	73	68	59	72
Percentage mentioning being tied down	30	43	23	54	26	19	39	56	41	43
Percentage mentioning work restrictions	27	16	43	26	33	26	35	20	19	29
Percentage saying children do not satisfy their										
Most important life-value	11	11	5	7	7	3	12	11	10	10
Second most important life-value	9	12	3	11	5	6	10	10	14	11
Percentage mentioning advantages										
Living through children	8	2	9	7	5	12	6	7	5	6
Achievement, power	35	36	43	48	21	30	38	25	29	32
Character, responsibility	0	2	0	0	1	0	1	2	1	2
Incentive to succeed	1	2	5	0	1	2	9	2	4	2
Fulfillment	2	8	13	4	14	4	7	12	5	7
Ratings of reasons for having children										
To be remembered	−.07	−.22	−.04	−.12	−.16	.15	−.31	−.32	−.21	−.30
To make you proud	−.05	.08	.12	.08	−.01	−.08	.04	.06	.02	.15
To do something	.09	.32	.12	.34	.26	.10	.34	.39	.22	.39
To watch them grow	.20	.29	.21	.35	.25	−.01	.39	.41	.33	.39
To look up to you	−.31	−.33	−.24	−.44	−.36	−.22	−.24	−.37	−.33	−.41
To be a better person	−.38	−.31	−.04	−.32	−.22	−.16	−.23	−.32	−.25	−.34

HUSBANDS										
Percentage mentioning disadvantages										
Tied down	7	31	9	20	11	16	15	20	13	17
Can't work	0	1	3	0	0	0	4	0	0	1
Percentage saying children prevent their doing other things	50	39	36	45	39	33	40	63	34	53
Percentage mentioning being tied down	32	22	12	30	29	21	15	42	23	31
Percentage mentioning work restrictions	11	11	18	7	7	8	10	11	3	5
Percentage saying children do not satisfy their										
Most important life-value	17	10	3	10	14	12	13	9	23	13
Second most important life-value	14	10	6	15	10	15	13	18	10	20
Percentage mentioning advantages										
Living through children	4	8	6	7	7	19	15	23	15	9
Achievement, power	48	39	23	30	28	38	31	32	41	38
Character, responsibility	0	5	0	0	10	5	6	9	3	3
Incentive to succeed	4	5	6	3	0	0	8	0	3	3
Fulfillment	0	6	6	15	10	5	17	14	5	11
Ratings of reasons for having children										
To be remembered	−.02	−.27	.16	−.08	−.26	.22	−.38	−.37	−.01	−.24
To make you proud	.15	.11	.02	−.06	−.13	.02	.12	.01	−.04	.10
To do something	.22	.33	.19	.27	.25	−.00	.35	.46	.12	.47
To watch them grow	.15	.37	.25	.39	.36	.19	.50	.42	.35	.49
To look up to you	−.23	−.29	−.13	−.29	−.23	.02	−.27	−.23	−.24	−.35
To be a better person	−.54	−.30	−.28	−.24	−.40	−.13	−.36	−.23	−.16	−.39

TABLE 11 Indicators of rising aspirations among high-parity non-

Indicator	Philippines		Turkey		Indonesia	
	HPN	LPL	HPN	LPL	HPN	LPL
WIVES						
Percentage mentioning disadvantages						
Tied down	5	8	6	19	15	0
Can't work	3	2	2	6	1	0
Percentage who say children prevent their doing other things	77	75	59	77	72	56
Percentage mentioning being tied down	11	12	49	93	60	38
Percentage mentioning work restrictions	24	17	30	16	10	18
Percentage saying children do not satisfy their						
Most important life-value	11	11	8	12	10	3
Second most important life-value	3	7	1	16	3	9
Percentage mentioning advantages						
Living through children	4	1	3	2	4	6
Achievement, power	4	5	3	15	2	0
Character, responsibility	1	4	0	0	0	0
Incentive to succeed	2	4	0	1	2	6
Fulfillment	2	1	0	6	1	0
Ratings of reasons for having children						
To be remembered	.37	.02	−.17	−.14	.00	.02
To make you proud	−.16	.18	.04	.10	−.05	.03
To do something	−.44	−.24	.02	.01	−.12	−.24
To watch them grow	−.12	.07	−.02	−.08	.08	.08
To look up to you	−.25	−.13	.13	.15	−.16	−.42
To be a better person	−.49	−.20	−.17	−.05	.04	.04
HUSBANDS						
Percentage mentioning disadvantages						
Tied down	5	0	0	20	5	0
Can't work	3	17	0	3	1	0
Percentage saying children prevent their doing other things	68	47	28	37	56	55
Percentage mentioning being tied down	17	13	22	31	17	12
Percentage mentioning work restrictions	23	33	19	7	37	41

limiters and low-parity limiters, by country and sex: 1975–76

Thailand		Korea		Taiwan		Singapore		United States	
HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL
3	8	15	38	9	26	21	37	33	80
1	5	0	3	0	0	0	10	0	7
67	71	67	74	90	79	35	70	44	77
6	19	30	55	13	37	26	76	50	95
26	23	37	25	63	36	17	24	11	18
7	9	3	16	2	10	19	41	37	25
4	9	8	11	2	10	16	17	9	26
0	0	7	4	2	1	2	2	6	11
0	3	46	33	3	13	2	3	61	40
0	1	0	2	0	1	0	1	6	4
0	2	0	5	0	1	11	9	0	1
0	1	2	10	2	6	0	6	33	33
−.01	−.18	−.01	−.33	−.06	−.26	−.09	−.59	−.55	−.50
.01	.16	.09	.13	−.06	.02	−.08	−.16	.15	.30
u	u	.02	.38	−.03	.10	−.30	−.19	.37	.29
.07	.20	.22	.47	.02	.27	−.06	.11	.70	.86
.07	.10	−.38	−.40	.02	.01	−.08	−.09	−.18	−.26
.05	−.11	−.19	−.33	−.21	−.50	−.37	−.64	−.07	−.04
3	5	0	23	0	13	22	21	50	67
2	4	0	6	0	0	11	2	0	3
46	72	37	49	60	37	22	25	100	72
2	16	32	36	20	27	17	24	100	92
15	23	6	8	35	18	6	5	13	5

TABLE 11 *(continued)*

Indicator	Philippines		Turkey		Indonesia	
	HPN	LPL	HPN	LPL	HPN	LPL
HUSBANDS *(continued)*						
Percentage saying children do not satisfy their						
Most important life-value	8	21	7	16	6	27
Second most important life-value	5	7	9	3	9	6
Percentage mentioning advantages						
Living through childen	15	0	2	7	9	11
Achievement, power	0	0	0	11	4	0
Character, responsibility	2	0	0	0	0	0
Incentive to succeed	10	7	0	2	5	6
Fulfillment	2	0	0	11	0	0
Ratings of reasons for having children						
To be remembered	−.03	−.12	−.04	.01	.10	.05
To make you proud	.13	.40	.02	−.10	.10	.12
To do something	−.39	−.30	.02	−.05	−.07	−.28
To watch them grow	.18	.10	−.01	−.05	.07	.05
To look up to you	−.02	−.17	.11	.18	−.15	−.22
To be a better person	−.50	−.06	−.12	.06	.07	−.15

u—unavailable.

HPN—high-parity nonlimiters. LPL—low-parity limiters.

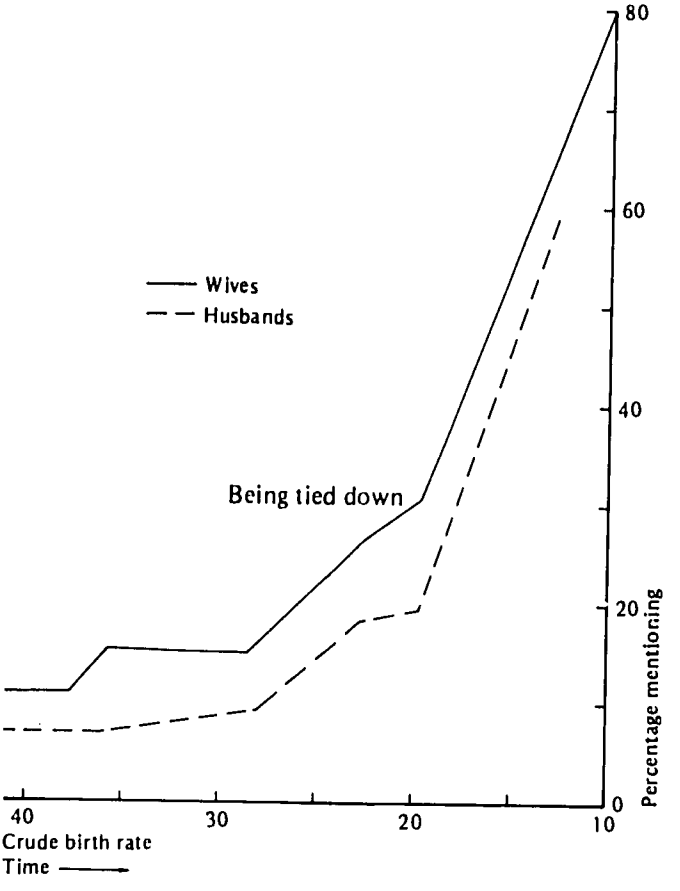
in the countries with lower fertility, there was a tendency for the latter to say, more often than the former, that children did not satisfy basic values. Among wives the comparisons were less consistent.

The overall pattern was clear and compelling: prediction P6 was supported but should be qualified in two ways. First, general restrictions on parents' activities did increase in salience, but not until lower levels of fertility were attained. Thus comparisons within countries at high and moderate fertility levels failed to show consistent differences, and comparisons among individuals also failed in high-fertility countries. In countries with lower fertility, on the other hand, comparisons between individuals did show differences in perceived restrictions. A second qualification was that work restrictions, when separated from other restrictions, showed on one question a slight upward trend for wives only at low fertility levels, but generally did not vary much. These results are illustrated in Figure 2, obtained by smoothing the data (Tukey, 1977:210–23) on perceived restrictions from the disadvantages question.

Thailand		Korea		Taiwan		Singapore		United States	
HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL
8	11	10	8	0	20	29	43	0	28
3	8	10	11	16	11	17	28	0	33
0	3	10	10	5	6	0	6	13	17
0	1	32	37	5	11	6	0	25	28
0	3	6	8	0	0	0	4	0	3
2	1	6	1	0	6	6	6	13	4
0	3	11	15	5	11	0	4	13	23
.06	−.19	.14	−.18	.08	−.14	−.31	−.67	−.69	−.42
.10	.14	.25	.15	−.07	−.07	.02	−.14	.31	.38
u	u	.15	.51	.03	.06	−.09	−.24	.56	.19
.13	.23	.05	.48	−.02	.25	−.15	.05	.93	.84
.12	.14	.09	−.38	.03	−.01	.02	−.18	−.44	−.22
.08	−.03	−.17	−.34	−.37	−.41	−.37	−.37	.18	.04

Psychological appreciation. Prediction P3 says that, as a consequence of rising aspirations, various psychological appreciation values should become more prominent. These values are diverse. Of the five coded from the advantages question (Table 8), aspirations should relate least equivocally to achievement and power motives, which should rise, and to the desire for self-fulfillment, which should also rise. Arguments could be made to link the other values to aspirations too, but these arguments would probably be more circuitous. All of the five values were less salient than economic benefits and rewarding interactions, except in the low-fertility countries (cf. Tables 4 and 16). Across high- and moderate-fertility countries there was no trend in these values, but the salience of a few values increased sharply for low-fertility countries. Self-fulfillment, in particular, was considerably more salient at the low-fertility end among both wives and husbands. Achievement and power were also relatively salient in the United States for both sexes, although they were equally salient in Korea. Character and responsibility were somewhat higher in low-fertility countries among wives.

FIGURE 2 Salience of being tied down, by fertility level, after smoothing



A slightly different set of six psychological appreciation values was among those rated in importance as reasons for having children. The trends in these values across countries were not consistent. Three values related to achievement, power, or self-fulfillment—to make you proud, to do something, to watch them grow—were more highly rated in the low- than in the high-fertility countries. Two other values—to be remembered, to be a better person—dropped in ratings at lower fertility levels. The last value—to look up to you—showed no trend. Being remembered and becoming a better person might be considered essentially status-related or social-reward values rather than personal-devel-

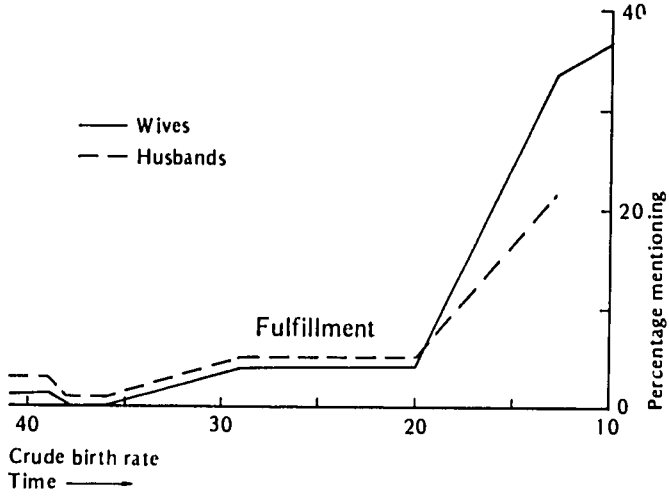
opment values. In that case, these values would reflect changes in cultural norms more than changes in personal aspirations. With these two values excluded, the remaining psychological appreciation values do support some rise in aspirations.

Across Philippine and Korean sample areas there was little discernible pattern in the salience of the open-ended responses. Small trends that appeared were not consistent across the sexes. Among the value ratings there were some differences. Across Philippine regions, becoming a better person and being remembered had lower ratings in Manila for husbands, but not for wives. Of the remaining values, two - to make you proud and to watch them grow - were slightly more highly rated in Manila, but one - to look up to you - was much lower in ratings in both Manila and Southern Tagalog. Across Korean cities and counties, being remembered dropped in ratings at lower fertility levels, but becoming a better person did not. Of the remaining values, some slight rise in ratings appeared for two - to do something and to watch them grow. The comparisons across communities on the structured questions, therefore, resembled the comparisons across countries: being remembered and becoming a better person declined with lower fertility, but some of the other values rose in ratings. These results, however, were less clear-cut.

Between high-parity nonlimiters and low-parity limiters the differences on the advantages question were few and scattered, though probably not random. For instance, limiters among both wives and husbands in Turkey mentioned achievement or power more often than nonlimiters. The other differences appeared only for one sex and not the other. Among the ratings, being remembered was more important for nonlimiters in the majority of cases, and becoming a better person was also generally more important among nonlimiters, though there were more exceptions. Of the other values, one - to watch them grow - was definitely more important among limiters. Two others - to make you proud and to do something - were more important among limiters for wives only. For husbands the reverse was slightly more likely.

Prediction P3 has some weak support. Particular psychological appreciation values did increase in salience at low fertility levels across countries. Among the advantages of having children, self-fulfillment rose in salience (Figure 3 represents this in smoothed fashion), as did achievement and power. Among rated values, to watch children grow, to make you proud, and to do something (values related to achievement, power, and self-fulfillment) rose in importance, and also distinguished individuals with lower fertility, which other values did not.

FIGURE 3 Salience of fulfillment by fertility level, after smoothing



Two of the structured values—being remembered and becoming a better person—appeared to be more group-oriented rather than personal, and consistently gave contradictory results. That there is some, even slight, effect in the predicted direction could be taken as encouraging. It is not being argued, after all, that these effects produce the fertility transition. In fact, they operate in the reverse direction, and merely indicate that aspirations relevant to having children do change.

Financial costs. Both the rising aspirations factor and the conjugal family factor imply that financial costs of children rise in the fertility transition, in the first case because aspirations for children rise and in the second case because costs are borne more directly by parents. Predictions P4 and S4, therefore, are identical. If costs can be shown to rise at lower fertility levels, either one or both of these factors may be the explanation.

Referring to Table 12, we find, however, that costs did not rise. Responses on the open-ended question specially mentioning the cost of education were separated from responses mentioning other costs, these others, in the aggregate, being substantially more common. Concern with these other costs neither increased nor decreased across fertility levels. Concern with the cost of education, on the other hand, actually decreased from high-fertility countries to moderate- and low-fertility

countries. This contradicts both predictions, but cannot be taken as an isolated finding. Using the same question on disadvantages, Arnold and others (1975:52) found financial costs to be less salient in Japan and Hawaii and more salient in Korea, Taiwan, the Philippines, and Thailand, even when respondents were divided into urban middle-class, urban lower-class, and rural groups.

Within the Philippines across regions (Table 13), financial costs were least salient among disadvantages in the highest-fertility region and increased in salience as fertility fell, though they fell again in salience in the lowest-fertility regions. Within Korea (Table 14), the trend was toward fewer responses mentioning financial costs at lower levels of fertility, particularly in the cities of Seoul, Daegu, and Pusan. The cost of education specifically also showed a slight decline. These patterns held for both wives and husbands. It does seem clear that the salience of perceived costs, on this measure, did not rise and, most probably, actually fell.

Moving to the individual level provides even more striking disconfirmation of the predictions (Table 15). Particularly among husbands—who in each country mentioned costs among disadvantages more often than wives—but also among wives, fewer low-parity limiters than high-parity nonlimiters mentioned financial costs. A large percentage difference in this direction appeared in five countries among husbands, in two countries among wives. The differences appeared equally in high-fertility countries, in moderate-fertility countries, and in low-fertility countries. Similar differences appeared in Korea for the cost of education. Respondents limiting their families showed less concern with financial costs than those not limiting their families.

How might these results be interpreted? One possibility is that the salience of financial costs depends not on the absolute level of such costs but on their level relative to income. Since incomes are usually higher in low-fertility areas, the perceived cost of children may actually decline. In relation to the schema presented earlier, we might say that observations of the effects of the higher aspirations factor and the emergence of the conjugal family factor are complicated by the simultaneous operation of the higher incomes factor. This interpretation would account for the pattern across countries and across regions, but it implies that the effects of these two factors on perceived costs of children are not strong enough to overcome the effect of the incomes factor, and therefore cannot by themselves explain the fertility transition. (These two factors have, however, other effects, some still to be considered, which conceivably could be stronger.) A structured question

TABLE 12 Perceptions of financial costs of children and childrearing demands, by country and sex of respondents: 1975–76

Indicator	Philippines	Turkey	Indonesia	Thailand	Korea	Taiwan	Singapore	United States	West Germany
WIVES									
Percentage mentioning financial costs among disadvantages									
Cost of education	12	6	13	3	6	1	1	2	0
Other financial costs	35	41	46	17	31	35	44	42	19
Percentage saying a couple should have									
More children than they can afford (if they want them)	2	1	6	3	4	1	0	8	na
Only the number they can afford	78	81	65	74	58	21	35	87	na
Fewer than they can afford	20	18	29	23	38	79	65	6	na
Percentage considering three children to be some financial burden	54	81	56	80	85	67	83	70	98
Percentage mentioning childrearing demands among disadvantages									
More work	2	33	18	3	0	33	19	6	10
Emotional strain	26	23	20	5	15	68	67	24	34
Health, pregnancy	3	7	1	3	1	0	0	1	1
Discipline	52	24	22	7	27	15	39	9	0
Child's sickness	15	15	60	6	15	9	0	6	0
Worry over child's future	4	4	5	1	9	5	0	7	0
Other childrearing problems	14	0	5	14	8	0	0	1	12
Percentage saying children cause moderate or a lot of worry and strain	68	78	78	67	61	88	61	72	76

HUSBANDS									
Percentage mentioning financial costs among disadvantages									
Cost of education	12	13	14	4	6	2	1	4	na
Other financial costs	39	55	58	25	43	41	58	47	na
Percentage saying a couple should have									
More children than they can afford (if they want them)	3	1	4	3	6	1	0	7	na
Only the number they can afford	74	86	73	79	54	17	33	81	na
Fewer than they can afford	23	13	23	19	40	82	67	12	na
Percentage considering three children to be some financial burden	41	82	48	74	84	66	77	66	na
Percentage mentioning childrearing demands among disadvantages									
More work	1	13	9	3	0	17	7	3	na
Emotional strain	26	9	16	6	12	65	53	25	na
Health, pregnancy	2	1	0	1	0	0	0	1	na
Discipline	55	22	24	8	19	19	36	7	na
Child's sickness	18	8	49	4	15	5	0	6	na
Worry over child's future	4	7	6	1	8	5	1	7	na
Other childrearing problems	14	0	4	11	11	0	0	2	na
Percentage saying children cause moderate or a lot of worry and strain	63	59	73	58	51	80	38	61	na

na—not applicable to West German sample.

TABLE 13 Perceptions of financial costs of children and childrearing demands, by region and sex of respondents: Philippines, 1975

Indicator	Bicol	Mindanao	East Visayas	Central Luzon	Cagayan	West Visayas	Central Visayas	Ilocos	Southern Tagalog	City of Manila
WIVES										
Percentage mentioning financial costs among disadvantages										
Cost of education	14	12	18	5	6	17	17	5	12	12
Other financial costs	24	34	54	24	40	49	46	36	29	26
Percentage saying a couple should have										
More children than they can afford (if they want them)	1	3	6	1	2	1	2	7	2	2
Only the number they can afford	73	51	62	83	82	95	34	68	92	93
Fewer than they can afford	26	46	32	16	16	3	64	25	7	4
Percentage considering three children to be some financial burden	42	61	52	61	61	50	67	79	44	61
Percentage mentioning childrearing demands among disadvantages										
More work	0	2	9	1	4	5	2	0	1	0
Emotional strain	33	25	31	19	68	32	29	12	18	9
Health, pregnancy	5	22	0	3	1	1	4	1	1	0
Discipline	72	30	46	50	36	44	47	52	64	53
Child's sickness	10	34	21	8	15	17	30	3	10	5
Worry over child's future	5	2	6	4	5	4	2	3	5	7
Other childrearing problems	11	9	10	14	18	24	10	16	11	14
Percentage saying children cause moderate or a lot of worry and strain	61	78	61	67	71	77	80	81	58	62

HUSBANDS										
Percentage mentioning financial costs among disadvantages										
Cost of education	19	14	15	6	5	10	19	25	8	25
Other financial costs	16	61	69	18	57	59	53	42	21	37
Percentage saying a couple should have										
More children than they can afford (if they want them)	0	15	0	0	9	1	6	17	2	0
Only the number they can afford	62	30	69	87	77	91	31	50	87	75
Fewer than they can afford	38	55	31	13	14	7	63	33	11	25
Percentage considering three children to be some financial burden	23	48	69	42	64	32	58	75	34	25
Percentage mentioning child-rearing demands among disadvantages										
More work	6	4	8	0	5	0	0	0	0	0
Emotional strain	31	25	23	15	62	35	19	8	20	0
Health, pregnancy	0	11	0	3	0	0	0	0	2	0
Discipline	47	21	39	70	48	47	56	33	72	63
Child's sickness	6	46	31	9	24	15	39	0	11	25
Worry over child's future	6	4	0	9	5	6	0	0	4	0
Other childrearing problems	19	4	15	18	19	18	11	8	12	0
Percentage saying children cause moderate or a lot of worry and strain	67	83	54	66	86	65	61	58	53	67

TABLE 14 Perceptions of financial costs of children and childrearing demands, by sample area and sex of respondents: Korea, 1976

Indicator	Hong-chon	Sosan	Naju	Jonju	Jinju	Chang-nyong	Seong-nam	Pusan	Daegu	Seoul
WIVES										
Percentage mentioning financial costs among disadvantages										
Cost of education	11	7	8	3	5	9	6	2	3	5
Other financial costs	34	30	41	53	37	32	37	23	22	22
Percentage saying a couple should have										
More children than they can afford (if they want them)	5	4	7	4	4	8	2	5	1	3
Only the number they can afford	58	51	55	74	71	59	65	53	63	58
Fewer than they can afford	37	45	39	22	25	33	33	42	36	40
Percentage considering three children to be some financial burden	93	82	79	78	91	78	91	86	81	91
Percentage mentioning childrearing demands among disadvantages										
More work	0	0	0	0	0	1	0	0	0	1
Emotional strain	12	18	16	11	17	15	17	9	16	14
Health, pregnancy	0	0	0	1	0	1	1	1	1	1
Discipline	35	25	50	35	33	41	17	14	20	21
Child's sickness	7	21	15	21	15	17	19	13	13	11
Worry over child's future	5	9	20	12	15	9	7	4	10	4
Other childrearing problems	3	9	13	21	4	9	6	3	7	6
Percentage saying children cause moderate or a lot of worry and strain	71	64	71	61	51	53	53	59	44	62

HUSBANDS										
Percentage mentioning financial costs among disadvantages										
Cost of education	15	3	12	0	11	8	4	0	3	6
Other financial costs	48	49	56	50	41	42	50	30	30	33
Percentage saying a couple should have										
More children than they can afford (if they want them)	0	5	21	5	0	5	6	5	0	6
Only the number they can afford	59	47	29	55	69	54	58	55	72	61
Fewer than they can afford	41	48	50	40	31	41	35	41	28	33
Percentage considering three children to be some financial burden	85	83	81	76	80	80	92	89	83	85
Percentage mentioning childrearing demands among disadvantages										
More work	0	0	0	0	0	0	0	0	0	0
Emotional strain	7	11	12	15	7	18	13	10	13	10
Health, pregnancy	0	0	0	0	0	0	0	0	3	0
Discipline	26	17	44	23	22	24	17	10	13	10
Child's sickness	11	14	18	20	19	13	23	10	13	12
Worry over child's future	11	7	21	15	11	8	4	0	11	4
Other childrearing problems	7	11	15	30	4	18	8	0	8	8
Percentage saying children cause moderate or a lot of worry and strain	59	52	47	60	31	37	52	73	47	51

TABLE 15 Perceptions of financial costs of children and childrearing country and sex: 1975–76

Indicator	Philippines		Turkey		Indonesia	
	HPN	LPL	HPN	LPL	HPN	LPL
WIVES						
Percentage mentioning financial costs among disadvantages						
Cost of education	13	16	4	9	13	12
Other financial costs	37	26	27	32	47	50
Percentage saying a couple should have						
More children than they can afford (if they want them)	3	1	3	0	6	6
Only the number they can afford	78	80	79	79	71	59
Fewer than they can afford	19	19	18	21	23	35
Percentage considering three children to be some financial burden	40	89	51	93	43	82
Percentage mentioning childrearing demands among disadvantages						
More work	1	3	18	30	22	12
Emotional strain	25	19	27	25	23	9
Health, pregnancy	3	5	4	6	1	C
Discipline	51	52	29	27	16	29
Child's sickness	16	17	8	9	64	68
Worry over child's future	1	6	0	4	5	9
Other childrearing problems	12	14	0	0	5	3
Percentage saying children cause moderate or a lot of worry and concern	73	65	77	74	81	79
HUSBANDS						
Percentage mentioning financial costs among disadvantages						
Cost of education	10	17	10	8	14	11
Other financial costs	35	25	126[a]	45	65	56
Percentage saying a couple should have						
More children than they can afford (if they want them)	8	0	0	0	5	6
Only the number they can afford	82	67	93	92	75	61
Fewer than they can afford	10	33	7	8	20	33
Percentage considering three children to be some financial burden	15	93	67	99	30	78

demands among high-parity nonlimiters and low-parity limiters, by

Thailand		Korea		Taiwan		Singapore		United States	
HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL
3	1	23	4	0	0	0	0	0	1
16	14	38	23	33	29	49	40	44	38
9	1	8	3	3	0	0	0	11	8
80	73	53	57	44	10	61	17	89	84
11	26	39	40	53	90	39	83	0	8
65	90	83	93	39	77	70	86	11	79
5	2	0	0	26	28	13	20	6	6
3	5	21	15	43	65	61	61	17	29
4	2	0	0	2	0	0	0	0	1
5	8	40	15	15	20	36	50	0	11
4	9	11	16	5	11	0	0	6	9
0	3	13	8	7	5	3	0	0	6
17	11	10	6	0	0	0	0	0	1
63	69	65	54	90	83	55	66	67	76
3	3	32	2	0	2	0	0	0	3
19	25	53	24	60	45	50	53	63	47
14	1	0	0	0	1	0	0	13	9
75	81	84	52	21	2	78	21	87	82
11	18	16	48	79	96	22	79	0	9
58	87	90	90	58	85	39	84	25	75

TABLE 15 *(continued)*

Indicator	Philippines		Turkey		Indonesia	
	HPN	LPL	HPN	LPL	HPN	LPL
HUSBANDS *(continued)*						
Percentage mentioning child-rearing demands among disadvantages						
More work	3	0	26	14	13	6
Emotional strain	28	42	5	7	17	17
Health, pregnancy	0	8	0	2	0	0
Discipline	57	50	2	27	19	22
Child's sickness	13	50	0	13	42	55
Worry over child's future	3	0	0	5	6	11
Other childrearing problems	5	17	0	0	4	0
Percentage saying children cause moderate or a lot of worry and strain	81	73	31	40	74	61

HPN—high-parity nonlimiters.

LPL—low-parity limiters.

a The tabulation program used (SPSS) counted two responses coded in the same category once each, even if both were from the same person, which explains why percentages may exceed 100.

provides a limited test of this interpretation. Respondents were asked: "Do you think a couple should have *more children than they can afford* if they want them, should they have *only* the number of children they can afford, or should they have *fewer* than that?" This question provides some control for differences in income level. Relatively few, between 0 and 8 percent, chose "more children." The highest percentages, in a complete reversal from the expectation, were in the United States. Between 6 and 82 percent chose "fewer children," and, again contrary to the expectation, the lowest percentages were in the United States. The percentages choosing "fewer" were considerably higher in the moderate-fertility rather than the high-fertility countries, a finding requiring further comment below.

Across sample areas within the Philippines and Korea, no real trend could be detected. If anything, those contending that couples should have fewer children than they can afford decreased with lower fertility, but this was only a marginal tendency. Across individuals, the situation was different. Limiters were consistently more likely than nonlimiters to insist that couples have fewer children than they can afford. This was especially true in the moderate-fertility countries, but also true in other cases.

Thailand		Korea		Taiwan		Singapore		United States	
HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL
2	0	0	0	10	17	0	9	0	4
3	13	16	18	75	57	56	48	25	32
1	0	0	0	0	0	0	0	0	0
3	13	42	18	10	26	61	50	0	7
9	3	20	18	5	7	0	0	0	4
0	1	0	4	5	2	6	0	0	5
15	7	26	6	0	0	0	0	0	0
52	67	58	58	100	85	28	43	63	64

Apart from this last finding, the idea that rising incomes mask a real increase in perceived costs was not supported. The last finding, that limiters were more likely to favor restricting childbearing relative to income, suggests that perceived costs may be a factor in differential fertility at the individual level, though it does not tie differences in perceived costs to the fertility transition. A second interpretation of the failure of perceived costs to increase may be considered next.

When considering the disadvantages of children, individuals may keep different numbers of children in mind. Those with large families may be thinking of the disadvantages of many children, those with small families of the disadvantages of only a few children. To investigate this possibility, respondents were asked whether they considered specific numbers of children to constitute some financial burden. The percentages of those who thought that three children constituted some financial burden bore little resemblance to percentages for the salience of financial costs. We would expect these percentages to show some relation to fertility levels, rising at lower levels. This was not uniformly the case. Almost all of the West German wives considered three children a burden, as compared with about half of the Philippine and Indonesian respondents. However, for the other low-fertility country, the

United States, the corresponding percentages were only 70 percent for wives and 66 percent for husbands, less than in four other countries with higher fertility. The greatest perceived financial burden seemed to be at moderate fertility levels,[10] which parallels the results on the previous question. It may be possible to argue that the perceived burden of children rises sharply at an early stage in the transition, but a continuing rise beyond the early stage is clearly not indicated.[11]

Across Philippine regions the highest percentages of respondents considering three children to be a burden were in the Ilocos region, with relatively low but not the lowest fertility. In Korea, too, there was an absence of the expected pattern. Across individuals, however, the situation was sharply different. In every case except one, there were large differences between high-parity nonlimiters and low-parity limiters, with the latter much more likely to consider three children a financial burden. Among husbands in Turkey, for instance, there was a difference of 32 percentage points between limiters and nonlimiters who considered three children a burden. (In contrast, *fewer* limiters than nonlimiters mentioned financial costs as a disadvantage of children, and the difference between them was over 50 percentage points.) Or again, among U.S. husbands, 50 percentage points more limiters than nonlimiters considered three children a burden (versus 16 percentage points fewer limiters who mentioned financial costs).

These contradictions between the measures lend support to the idea that, when respondents mentioned financial disadvantages, they had different numbers of children in mind. With number of children constant, the data indicated a negative link between the perception of costs and individual fertility. The data did not support any link between the perception of costs and area-wide or country-wide fertility levels. Unlike the two previous predictions from the rising aspirations factor, Prediction P4 (and the identical Prediction S4) are disconfirmed, and, overall, perceptions of the financial costs of children appear not to rise in the fertility transition (Figure 4).

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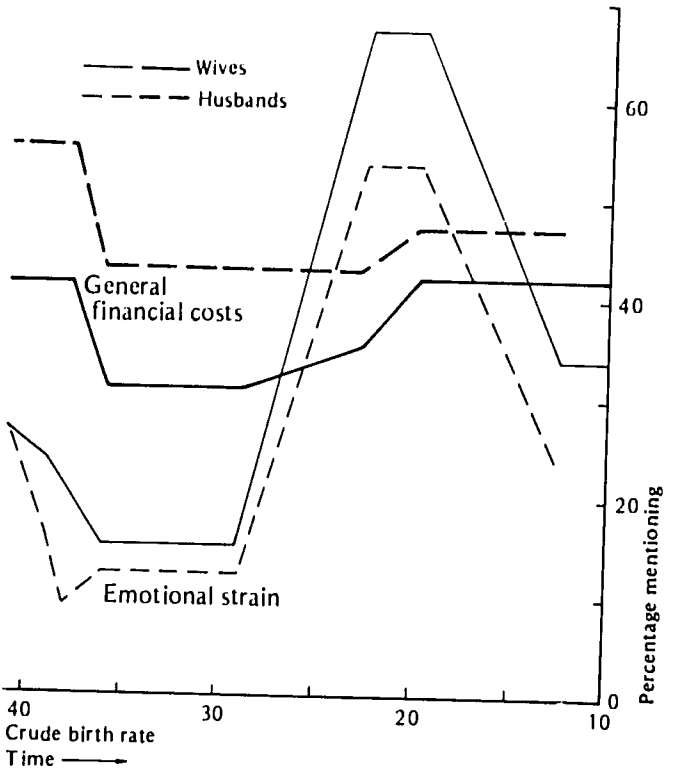
10 Arnold and others (1975:43–47) found a similar pattern with smaller, selected samples in six countries. Hawaii and Japanese respondents were less likely to perceive three children as a heavy financial burden, Korean respondents were much more likely to do so, and Thai and Taiwanese respondents were in between. Philippine respondents, however, fell outside the pattern, being the least likely to consider three children a heavy burden.

11 If one looks, alternatively, at the percentages who considered two or four children to be some financial burden, the patterns are no more supportive of the predictions.

FIGURE 4 Salience of general financial costs and emotional strain by fertility level, after smoothing



Childrearing demands. As with financial costs, childrearing demands should become heavier if either the rising aspirations factor or the conjugal family factor is operative. Predictions P5 and S5 must therefore be considered together. Seven disvalues among those coded from the disadvantages question are classified under childrearing demands. The emotional strain of childrearing is the one that should most clearly be affected. Greater ambitions for children and greater closeness to them should mean more tension in caring for them, though not necessarily more actual work. Some of the other disvalues, like concern with children's sickness, should actually decrease in salience for other reasons.

Generally there were only slight trends in these disvalues on the open-ended question (Table 12). Emotional strain did become more salient, but it was highest at moderate fertility levels and about as salient at high and at low fertility levels. Two disvalues, sickness and

worry about discipline, dropped considerably in salience, though not consistently. Both disvalues were lower in salience at the low-fertility end, but at the high-fertility end their salience was quite variable. Another disvalue, concerns tied to the mother's health or to pregnancy, had low salience to begin with and practically disappeared as a concern at moderate and low fertility levels. Another way of looking at the data is to consider which of these seven disvalues was most salient in each country. In the high-fertility countries, either children's sickness or discipline was generally most salient. In the moderate- and low-fertility countries (except for Korea), emotional strain was the most salient.

A similar pattern could not be found across Philippine or Korean sample areas. For the Philippines, emotional strain declined slightly across regions, as did concern with the additional work children require. The other disvalues did not change in salience. The most frequently mentioned of these disvalues in most areas was disciplinary problems. For Korea, discipline clearly declined in salience and another disvalue, worry over the child's future, showed a possible decline. As with the cross-national patterns, there was no clear support for the predictions.

The comparisons between nonlimiters and limiters were no more enlightening. For wives, emotional strain was more salient among limiters in Taiwan and the United States, but among nonlimiters in Indonesia. For husbands, emotional strain was more salient among limiters in the Philippines and Thailand, but among nonlimiters in Taiwan. Discipline and sickness were not consistently higher in salience for either limiters or nonlimiters.

One structured question provides further negative evidence. Respondents indicated how much worry and emotional strain children cause. From 38 to 88 percent admitted at least a moderate amount of worry and strain, but these ratings showed no consistent variation across fertility levels, whether comparisons were made across countries, within countries, or between individuals.

None of the disvalues under childrearing demands provided satisfactory support for the predictions. There was some indication that emotional strain, by itself, increased in salience, particularly in comparison with such disvalues as discipline and sickness, and particularly in moderate-fertility countries (Figure 4). As with financial costs, respondents may assess childrearing demands in relation to the number of children they expect, prefer, or are more familiar with. The tendency for emotional strain to be more salient among limiters than

nonlimiters might have been stronger if all respondents had the same number of children in mind. It appears, then, that two predictions from the rising aspirations factor are confirmed but two others are not, a discrepancy to be discussed in the concluding section.

Emergence of the conjugal family

The shift from extended families to conjugal families should have two effects on values and disvalues: costs are shifted directly onto the parents rather than being borne by the kin group as a whole, and emotional attachments within the family are intensified. It has just been shown that the first of these effects cannot explain the transition; costs and childrearing demands were not perceived as heavier at lower fertility levels. The second effect is related to two predictions, S2 and S7, which will now be considered.

Rewarding interactions. Prediction S2 says that companionship from children and the marital bond should increase in prominence. If this happens, the value of children should rise; nevertheless, this effect would indicate that the conjugal family factor, which also has reverse effects, is operative. The four rewarding-interactions values coded from the advantages question may be examined (Table 16). The companionship and love that children provide increased in salience from high-fertility to moderate-fertility to low-fertility countries, as predicted. The trend was clearer and stronger among husbands (as might be expected where men are more strongly affected by depersonalization of occupational roles), but also appeared among wives. The values of happiness and play, fun, and distraction that children bring are related to companionship but are more difficult to interpret. For three countries, happiness was not reported as an answer; it was either not mentioned or was coded in a more specific category, occasionally under play, fun, and distraction. When happiness and play, fun, and distraction were considered together rather than separately, a rise in salience appeared from high- to moderate-fertility countries (though the Philippine respondents also mentioned these values often), followed by a slight drop in salience from moderate- to low-fertility countries. The last value in this set, children strengthening the marital bond, showed the predicted rise, more notably between moderate- and low-fertility countries.

In contrast to the clarity with which predictions were supported across countries, across regions within countries the patterns were less clear. In the Philippines, the marital bond was more salient in Manila than elsewhere (Table 17). None of the other values showed this trend,

TABLE 16 Indicators of the emergence of the conjugal family, by country and sex: 1975–76

Indicator	Philip-pines	Turkey	Indo-nesia	Thai-land	Korea	Taiwan	Singa-pore	United States	West Germany
WIVES									
Percentage mentioning advantages									
Companionship, love	13	23	14	12	25	37	41	54	31
Happiness	49	0	19	8	47	0	69	0	49
Play, fun, distraction	19	22	9	2	1	69	15	49	0
Marital bond	10	15	9	4	17	11	21	32	28
Ratings of reasons for having children									
Not to be lonely	.11	.21	.05	−.03	.30	.26	.57	−.00	−.02
To be needed	−.09	−.43	−.16	−.03	.09	−.26	.14	.33	.35
To bring love	.20	.13	.09	.13	.18	.07	.16	.93	.82
Fun	.14	.16	.08	−.06	.21	.13	.24	.65	.89
To complete family	.10	.17	.07	.08	.12	.27	.56	.34	.24
Marital bond	.19	.17	.11	.06	.08	.04	.34	−.01	.26
Percentage mentioning marital strains among disadvantages	1	1	1	0	4	1	1	6	1
HUSBANDS									
Percentage mentioning advantages									
Companionship, love	13	12	10	5	22	22	25	41	na
Happiness	48	0	15	9	45	0	74	0	na
Play, fun, distraction	17	29	8	2	3	65	18	44	na
Marital bond	11	11	12	6	18	12	32	35	na
Ratings of reasons for having children									
Not to be lonely	.05	.07	−.02	−.07	.30	.29	.51	−.08	na
To be needed	−.10	−.36	−.11	−.05	.04	−.28	.13	.20	na
To bring love	.19	.10	.08	.07	.27	.12	.08	.92	na
Fun	.13	−.07	.06	−.09	.23	.15	.27	.67	na
To complete family	.13	.08	.03	.13	.28	.32	.65	.43	na
Marital bond	.21	.11	.10	.08	.15	.08	.40	.13	na
Percentage mentioning marital strains among disadvantages	1	3	1	0	8	1	1	7	na

na—not applicable to West German sample.

however, and companionship actually appeared to decline in salience. In Korea, a slight decrease for companionship and increase for the marital bond with lower fertility appeared, but neither was unambiguous (Table 18).

Across individuals within countries the patterns were supportive of the predictions (Table 19). In three out of eight countries, a large difference appeared among wives between high-parity nonlimiters and low-parity limiters on the companionship value, and in one other country the difference was almost large enough to be noted. In each case the difference was in the predicted direction. Among husbands, however, the differences were as predicted only for Turkey; for moderate- and low-fertility countries, the differences were reversed, low-parity limiters mentioning this value less often than high-parity nonlimiters. It should be noted that the comparisons among husbands were based on fewer cases, and were less reliable. For the two values of happiness and play-fun-distraction, all the large percentage differences among wives and all but one of these differences among husbands were in the predicted direction. For the last value in this set, the marital bond, one disconfirming instance again appeared among husbands (in the United States), but generally low-parity limiters among both wives and husbands mentioned this value more often.

Generally similar results could be found from structured questions. Six rewarding interactions values were rated: not to be lonely, to bring love, to be needed, fun, to complete the family, and to strengthen the marital bond. The ratings for these values generally went up at lower fertility levels. Wives' ratings for fun, for instance, were between −.06 and .16 in the high-fertility countries, between .13 and .24 in the moderate-fertility countries, and between .65 and .89 in the low-fertility countries. Not all the patterns were as convincing as this: to bring love rose very sharply, but only at low fertility levels; not to be lonely and to complete the family were higher at moderate than at low fertility levels; and the marital bond was surprisingly low in the United States. Overall, nevertheless, some rise in the importance of rewarding interactions was evident.

Across Philippine regions, similar trends could not be found. The only noteworthy aspect was that Manila husbands gave particularly high ratings to three values, to bring love, to complete the family, and to strengthen the marital bond. Across Korean cities and counties, a slight upward trend could be found in two values, to bring love and to be needed, and a firmer upward trend in the marital bond value.

The nonlimiter-limiter comparisons strongly supported the prediction.

TABLE 17 Indicators of the emergence of the conjugal family, by region and sex: Philippines, 1975

Indicator	Bicol	Mindanao	East Visayas	Central Luzon	Cagayan	West Visayas	Central Visayas	Ilocos	Southern Tagalog	City of Manila
WIVES										
Percentage mentioning advantages										
Companionship, love	20	25	9	8	11	22	12	8	10	10
Happiness	49	57	71	47	56	57	41	55	41	61
Play, fun, distraction	17	22	12	16	15	15	24	10	23	20
Marital bond	8	14	6	5	15	7	5	3	14	20
Ratings of reasons for having children										
Not to be lonely	.08	.18	.11	.08	.20	.04	.10	.29	.11	.16
To be needed	−.18	−.08	−.05	−.13	−.04	−.12	−.17	−.09	−.04	−.11
To bring love	.18	.25	.34	.19	.19	.16	.19	.25	.18	.20
Fun	.18	.19	.28	.15	.23	.09	.17	.30	.06	.14
To complete family	.15	.08	.20	.08	−.02	.08	.10	.01	.14	.10
Marital bond	.15	.23	.20	.18	.20	.16	.26	.18	.18	.20
Percentage mentioning marital strains among disadvantages	1	2	1	1	1	3	1	1	2	2
HUSBANDS										
Percentage mentioning advantages										
Companionship, love	27	17	8	3	5	23	8	17	9	8
Happiness	44	72	61	58	45	55	33	58	39	33
Play, fun, distraction	3	14	39	21	14	17	28	8	11	50
Marital bond	6	24	8	5	27	4	6	17	10	50
Ratings of reasons for having children										
Not to be lonely	−.04	.06	.29	.16	.16	−.01	−.19	.33	.04	.17
To be needed	−.10	−.18	−.09	−.16	.07	−.11	−.19	.09	−.07	−.17
To bring love	.26	.24	.29	.21	.25	.05	.23	.17	.18	.42
Fun	.08	.24	.29	.19	.21	.10	.20	.25	.03	.25
To complete family	−.01	.17	−.02	.16	.07	.08	.23	.08	.16	.33
Marital bond	.23	.24	.21	.21	.16	.08	.34	.08	.22	.42
Percentage mentioning marital strains among disadvantages	0	11	0	0	0	0	0	0	2	0

TABLE 18 Indicators of the emergence of the conjugal family, by sample area and sex: Korea, 1976

Indicator	Hong-chon	Sosan	Naju	Jonju	Jinju	Chang-nyong	Seong-nam	Pusan	Daegu	Seoul
WIVES										
Percentage mentioning advantages										
Companionship, love	27	31	16	19	24	33	27	19	24	20
Happiness	43	41	43	56	38	57	56	42	54	49
Play, fun, distraction	0	1	3	2	2	1	3	1	4	1
Marital bond	4	20	16	14	11	17	19	19	19	17
Ratings of reasons for having children										
Not to be lonely	.43	.34	.09	.32	.29	.33	.36	.28	.28	.27
To be needed	−.01	.01	.14	.00	.04	.08	.10	.26	.15	.17
To bring love	.07	.15	.06	.23	.18	.00	.16	.41	.22	.26
Fun	.22	.21	.12	.25	.21	.10	.21	.18	.27	.26
To complete family	.30	.32	.29	.49	.34	.33	.21	.29	.40	.26
Marital bond	−.03	.08	−.01	−.02	.04	−.04	.17	.17	.21	.12
Percentage mentioning marital strains among disadvantages	0	4	1	11	2	2	5	7	4	4
HUSBANDS										
Percentage mentioning advantages										
Companionship, love	30	24	21	20	21	38	21	18	21	16
Happiness	37	34	35	55	35	54	60	36	31	58
Play, fun, distraction	0	5	6	0	7	0	6	0	10	2
Marital bond	7	16	23	30	10	5	21	14	18	23
Ratings of reasons for having children										
Not to be lonely	.39	.38	.05	.39	.19	.29	.35	.14	.30	.31
To be needed	−.06	−.00	.17	−.01	−.02	−.00	−.11	.14	.37	.04
To bring love	.05	.35	.02	.24	.22	.17	.25	.37	.19	.40
Fun	.25	.26	.02	.12	.25	.04	.33	.28	.17	.31
To complete family	.22	.30	.05	.37	.39	.34	.23	.29	.22	.30
Marital bond	.15	.05	.14	.07	.16	−.15	.25	.28	.27	.25
Percentage mentioning marital strains among disadvantages	4	9	9	17	4	3	8	5	5	7

TABLE 19 Indicators of the emergence of the conjugal family among 1975–76

Indicator	Philippines		Turkey		Indonesia	
	HPN	LPL	HPN	LPL	HPN	LPL
WIVES						
Percentage mentioning advantages						
Companionship, love	11	20	27	31	10	9
Happiness	42	62	0	0	20	12
Play, fun, distraction	11	24	8	23	7	0
Marital bond	5	13	13	17	7	12
Ratings of reasons for having children						
Not to be lonely	.06	.16	.04	.25	.03	.01
To be needed	−.10	−.11	−.58	−.43	−.19	−.20
To bring love	.17	.16	−.06	.38	.08	.13
Fun	.11	.16	.14	.21	.08	−.02
To complete family	.08	.12	.27	.34	.04	.07
Marital bond	.17	.21	−.09	.33	.10	.10
Percentage mentioning marital strains among disadvantages	2	3	2	1	1	0
HUSBANDS						
Percentage mentioning advantages						
Companionship, love	12	7	2	24	10	17
Happiness	34	50	0	0	16	6
Play, fun, distraction	10	21	8	41	11	11
Marital bond	5	50	15	19	7	6
Ratings of reasons for having children						
Not to be lonely	.02	−.08	−.04	.04	−.00	.01
To be needed	−.02	−.02	−.67	−.25	−.10	−.05
To bring love	.10	.18	−.01	.27	.03	.12
Fun	.02	−.02	−.02	.16	.06	.12
To complete family	.02	.25	.13	.27	.01	−.05
Marital bond	.05	.38	−.01	.28	.10	.18
Percentage mentioning marital strains among disadvantages	3	0	0	4	0	0

HPN–high-parity nonlimiters.
LPL–low-parity limiters.

In the three moderate-fertility countries, limiters gave these values ratings at least .10 higher than nonlimiters in 32 out of 36 comparisons. Among the high-fertility countries, the record in Thailand and Turkey was almost as good, but in the Philippines support for the prediction was weak and in Indonesia there was no support, but no contradic-

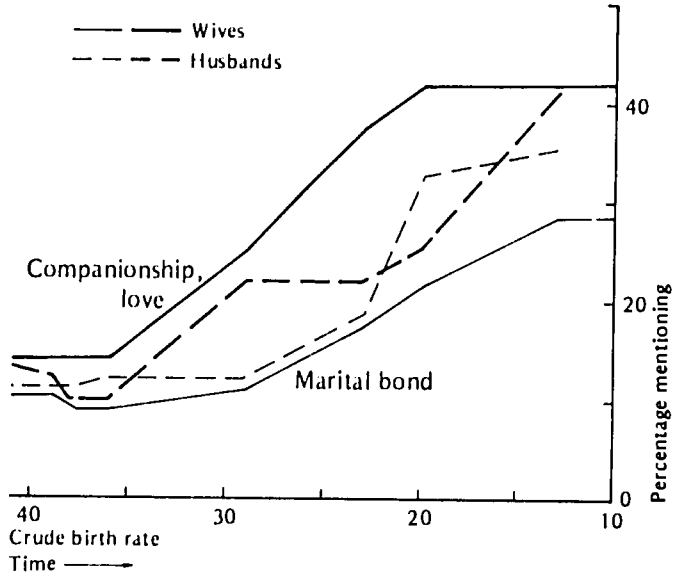
high-parity nonlimiters and low-parity limiters, by country and sex:

Thailand		Korea		Taiwan		Singapore		United States	
HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL
3	19	15	21	24	34	29	41	50	51
5	13	33	53	0	0	71	85	0	0
1	0	3	1	80	83	9	23	61	53
0	4	17	23	0	18	5	23	28	28
−.12	.03	.30	.33	.19	.36	.38	.59	.15	.04
−.08	.01	−.06	.19	−.18	−.30	.15	.30	.43	.31
.05	.22	−.10	.31	−.03	.17	.01	.30	.87	.92
−.12	.03	.15	.21	.06	.21	−.03	.35	.65	.66
−.02	.17	.29	.41	.17	.42	.40	.55	.48	.33
−.05	.14	−.03	.12	−.19	.17	.11	.44	−.24	−.07
0	0	0	6	0	2	0	1	6	7
5	8	42	6	35	20	29	34	63	32
7	18	43	56	0	0	59	85	0	0
2	3	0	4	75	70	23	19	37	51
1	11	10	22	10	12	23	37	50	38
−.11	−.03	.19	.38	.23	.44	.41	.54	.18	−.09
−.12	−.01	.04	.20	−.37	−.32	.13	.26	.43	.19
−.01	.10	.20	.45	−.02	.18	−.04	.24	.93	.92
.00	−.03	.10	.23	.03	.36	.13	.36	.68	.69
−.03	.22	.15	.32	.23	.55	.35	.64	.68	.46
−.02	.15	.00	.30	.08	.27	.35	.60	.18	.15
0	1	0	9	0	0	0	3	0	7

tory trends either. However, the low-fertility country, the United States, did supply contradictory trends: three values, not to be lonely, to be needed, and to complete the family, were more highly rated by nonlimiters among both wives and husbands.

Overall, Prediction S2 was reasonably well supported, as Figure 5 in-

FIGURE 5 Salience of marital bond and companionship, love by fertility level, after smoothing



dicates with a smoothed plot for two of the values. The differences in salience on the open-ended question were clearest and most consistent for the marital bond, and stronger toward the low-fertility end. Comparisons among the other three values from the open-ended question were complicated by overlapping categories, but generally they also became more salient with low fertility. On the structured measures, where values were distinguished differently, a generally supportive pattern was also found, with several values rising very sharply at low fertility levels. It is notable that respondents who wanted fewer children actually mentioned interaction rewards more often and those who wanted more children mentioned these values less often, which should discourage any simple-minded attempt to add up different values attached to children. Why the contrasts were weaker across Philippine and Korean sample areas is not clear. Within both countries the contrasts between high-parity nonlimiters and low-parity limiters were usually as predicted, but the contrasts between communities and regions were largely blurred. Unlike economic values, which are limited by the opportunities available in each community, interaction rewards may have greater latitude for variation within communities, which may partly explain the findings.

Marital strain. From the emergence of the conjugal family factor, the next prediction, S7, follows, that marital strain due to children should be more prominent at lower fertility levels. Since marital strain was quite low in salience on the disadvantages question, not being mentioned at all in two country samples, it is unlikely that concern about this problem exerts a major influence on fertility. Marital strain was somewhat more salient in the United States, at the low-fertility end, but not in West Germany, and also more salient in Korea. Across Philippine regions, marital strain received little mention, and hardly varied in frequency. Across Korean regions, salience was higher, but linear trends were again absent. Between nonlimiters and limiters, the single difference that approached 10 percentage points was among Korean husbands, limiters more often mentioning marital strain. Prediction S7 had at best minimal support in comparisons across countries, but may not have been adequately tested because of its low salience on the question used.

Weakening cultural props for high fertility

Social benefits. The next prediction, C1, involving weakening cultural props, covers three values of children: the family name or family line, religious and social obligations, and adult status and social norms. The last two of these were substantially less salient among advantages of children than the economic benefit values, which are in the same instrumental assistance cluster (Table 20). Few respondents considered social pressures to be a salient motive for childbearing.[12] Nor were any of the three values more salient for high-fertility countries. The family name or family line varied considerably in salience, being higher among husbands than wives and in Taiwan and Indonesia than elsewhere. But no trend appeared across fertility levels. Religious and social obligations were higher in Turkey, but no higher in the other high-fertility countries than elsewhere. Adult status and social norms appeared, in fact, to rise in salience with lower fertility, being relatively high for low-fertility countries (though this value was also relatively salient for Turkey). In the United States and West Germany, responses that "it's natural" to have children, that "that's what marriage is all about," and that having children "makes you an adult" or "makes you feel more adult" were

12 As I have observed elsewhere (Bulatao, 1975: 21), "This does not necessarily indicate that group pressure was unimportant: it may be that group demands were so internalized as to become identical with individual interests. Although the rhetoric of justification for childbearing may conceal collectivistic motivations, it is nevertheless predominantly individualistic."

TABLE 20 Indicators of cultural props for high fertility, by country and sex: 1975–76

Indicator	Philip-pines	Turkey	Indo-nesia	Thai-land	Korea	Taiwan	Singa-pore	United States	West Germany
WIVES									
Percentage mentioning advantages									
Family name, line	7	8	36	4	19	37	21	6	5
Religious, social obligations	1	7	3	2	2	1	0	2	0
Adult status, social norms	1	14	0	0	5	5	3	14	18
Ratings of reasons for having children									
To continue family line	.02	.11	.13	.21	.46	.28	.22	−.28	−.46
To please relatives	−.16	−.23	−.02	−.11	.31	.04	.03	−.59	−.45
Religion	−.42	−.03	−.13	−.54	−1.18	−.59	−.81	−.57	−.57
Odd to be childless	−.03	.11	−.17	−.11	.09	.07	.06	−.34	−.04
To be a woman/man	−.07	.19	−.01	−.08	−.32	.20	.20	.04	.04
Percentage mentioning overpopulation among disadvantages	0	1	0	0	1	0	0	3	1
Percentage considering overpopulation a somewhat serious or very serious problem	74	37	40	81	86	87	88	62	na
Percentage[a] considering overpopulation a reason for themselves to have fewer children	63	54	23	54	71	66	48	43	30
HUSBANDS									
Percentage mentioning advantages									
Family name, line	12	15	53	13	25	49	26	11	na

Religious, social obligations	1	22	7	4	5	3	1	4	na
Adult status, social norms	1	17	1	1	7	7	5	12	na
Ratings of reasons for having children									
To continue family line	.11	.27	.13	.32	.39	.31	.32	−.12	na
To please relatives	−.21	−.18	−.01	−.10	.21	.03	.03	−.57	na
Religion	−.51	.05	−.07	−.68	−1.12	−.67	−.80	−.60	na
Odd to be childless	.00	.03	−.22	−.12	.06	.09	.03	−.44	na
To be a woman/man	−.06	.04	−.08	−.05	−.30	.17	.15	−.35	na
Percentage mentioning overpopulation among disadvantages	0	0	0	0	3	0	0	5	na
Percentage considering overpopulation a somewhat serious or very serious problem	71	48	55	76	89	88	88	60	na
Percentage[a] considering overpopulation a reason for themselves to have fewer children	60	35	32	53	72	68	55	43	na

na—not applicable to West German sample.

a Base for percentages includes those who considered overpopulation not to be a serious problem at all.

more common. In Turkey, the emphasis was on the related idea that "most people expect married couples to have children."

Ratings of the importance of a similar set of five values also showed the absence of any consistent downward trend. There were in fact no monotonic trends in these ratings. For four of the values - particularly for continuing the family line and pleasing relatives, but also for becoming a woman or man (through having children) and the oddness of being childless - the ratings rose from high- to moderate-fertility countries, then fell sharply, to the lowest levels, for low-fertility countries. For pleasing relatives, for instance, the ratings were between −.23 and −.01 in the high-fertility countries, between .03 and .31 in the moderate-fertility countries, and between −.59 and −.45 in the low-fertility countries. For the fifth value, religion, ratings fell from high- to moderate-fertility countries, then rose slightly in low-fertility countries. Two other values that might properly fall in this group - to be remembered and to become a better person - declined in ratings, as was earlier shown.

Further disconfirmation of the prediction was provided in regional comparisons. For the Philippines, the family name fluctuated in salience on the open-ended question without definite pattern (Table 21). The other two values were too seldom mentioned for any clear patterns to appear. Adult status and social norms, however, were slightly more salient in Manila - contrary to predictions - than elsewhere. For Korea, the levels of salience of these three values were generally higher than in the Philippines, a finding that again was contrary to predictions (Table 22). A slight and inconsistent tendency for the family name to decline in salience at lower fertility levels was the only supportive finding. No trend appeared across Korean cities and counties on the other two values. Among the structured ratings, becoming a woman or a man was up slightly in ratings in the two lowest-fertility regions in the Philippines. Other values showed no convincing trends. In Korea, becoming a woman or a man moved slightly downward. Again there were no other solid trends.

Between high-parity nonlimiters and low-parity limiters, the few differences in the salience of these values among advantages of children were inconsistent with predictions (Table 23). In no case among wives was there a difference in regard to the family name. Among husbands, a large percentage difference in regard to the family name did appear in five cases, but in four of these the differences ran counter to predictions. On the adult status and social norms value, the only differences were in the United States and Turkey (among both wives and husbands)

and in Taiwan (among husbands). In each of these cases, low-parity limiters considered this value more salient. There were large differences between the two groups in roughly half the comparisons of value ratings, but the differences were as likely to go one way as the other. Nor was it possible to identify individual values or individual countries that were more consistent than the others.

In no set of comparisons, therefore, did variations in perceived values attached to children agree with the cultural props explanation for the fertility transition. As Figure 6 illustrates, the family name did not decrease in salience and one of the values, adult status and social norms, in fact appeared to increase slightly in salience on the open-ended question with lower fertility. A rise in the salience and importance of some of these values at intermediate fertility levels and a subsequent decline are a possibility. However, cultural rather than developmental factors may have produced the observed patterns. These patterns, furthermore, do not support the prediction. It may be that parents conceal the cultural pressures for childbearing, either deliberately in order to avoid the appearance of being manipulated by others or unintentionally because these pressures are thoroughly internalized. To rescue the cultural explanation, one would have to further hypothesize differential rates of concealment of these values, and it is not easy to see what could account for these across fertility levels. It is possible also that the cultural explanation is more appropriate at a still earlier stage in the

FIGURE 6 Salience of family name and adult status, social norms by fertility level, after smoothing

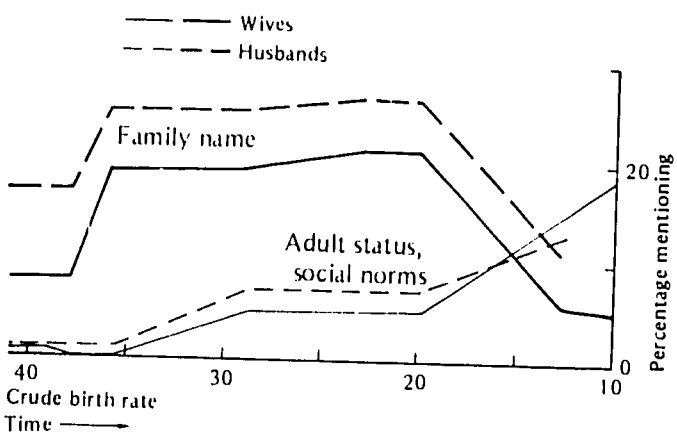


TABLE 21 Indicators of cultural props for high fertility, by region and sex: Philippines, 1975

Indicator	Bicol	Min-danao	East Visayas	Central Luzon	Cagayan	West Visayas	Central Visayas	Ilocos	South-ern Tagalog	City of Manila
WIVES										
Percentage mentioning advantages										
Family name, line	9	15	3	4	9	5	12	14	4	16
Religious, social obligations	3	2	0	1	1	1	2	0	1	0
Adult status, social norms	1	2	0	1	0	0	1	0	1	4
Ratings of reasons for having children										
To continue family line	.06	−.12	.06	.03	−.17	−.01	−.05	−.06	.12	.08
To please relatives	−.08	−.49	−.14	−.09	−.41	−.05	−.43	−.33	−.05	−.15
Religion	−.40	−.54	−.36	−.41	−.43	−.48	−.33	−.51	−.38	−.60
Odd to be childless	−.21	.11	.18	−.17	−.05	.03	.12	−.36	−.03	.08
To be a woman/man	.03	−.30	−.21	−.03	−.22	−.12	−.27	−.27	.09	.14
Percentage mentioning over-population among disad-vantages	0	2	1	0	0	0	0	3	0	0
Percentage considering over-population a somewhat serious or very serious problem	76	58	61	59	59	87	71	71	82	84
Percentage considering over-population a reason for them-selves to have fewer children	67	50	51	48	41	78	66	53	66	76

HUSBANDS										
Percentage mentioning advantages										
Family name, line	23	14	0	8	18	12	14	17	9	17
Religious, social obligations	0	3	0	0	0	0	0	0	3	0
Adult status, social norms	3	0	0	0	0	4	0	0	0	8
Ratings of reasons for having children										
To continue fmaily line	.08	.03	.06	.16	.07	.10	.20	.08	.14	.08
To please relatives	−.10	−.28	−.25	−.21	−.50	−.16	−.55	−.36	−.09	−.08
Religion	−.54	−.56	−.48	−.66	−.55	−.50	−.44	−.82	−.41	−.75
Odd to be childless	−.21	.20	.06	−.21	.22	.05	.11	.00	−.03	.00
To be a woman/man	.02	−.28	−.25	−.16	−.36	.02	−.39	−.08	.11	.08
Percentage mentioning over-population among disad-vantages	0	0	0	0	5	0	0	0	0	0
Percentage considering over-populatio· a somewhat serious or very se·.ous problem	64	52	62	65	64	71	61	58	83	100
Percentage considering over-population a reason for them-selves to have fewer children	59	47	51	58	44	63	57	41	66	83

TABLE 22 Indicators of cultural props for high fertility, by sample area and sex: Korea, 1976

Indicator	Hong-chon	Sosan	Naju	Jonju	Jinju	Chang-nyong	Seong-nam	Pusan	Daegu	Seoul
WIVES										
Percentage mentioning advantages										
Family name, line	19	19	37	31	20	20	27	3	11	11
Religious, social obligations	2	2	4	2	6	2	5	2	1	2
Adult status, social norms	8	4	4	11	6	4	6	10	4	3
Ratings of reasons for having children										
To continue family line	.55	.43	.43	.50	.51	.53	.42	.37	.45	.42
To please relatives	.41	.32	.28	.27	.27	.31	.37	.30	.29	.31
Religion	−1.08	−1.12	−1.41	−1	−1.20	−1.19	−1.22	−1.03	−1.26	−1.16
Odd to be childless	.06	.16	.07	.	.02	.03	01	.09	.10	.15
To be a woman/man	−.42	−.35	−.33	−.51	−.28	−.35	−.25	−.26	−.31	−.25
Percentage mentioning over-population among disadvantages	0	0	3	2	2	1	1	0	1	0
Percentage considering over-population a somewhat serious or very serious problem	80	86	90	78	89	71	90	92	88	93
Percentage considering over-population a reason for themselves to have fewer children	63	73	68	62	69	61	78	73	66	79

HUSBANDS										
Percentage mentioning advantages										
Family name, line	26	32	50	37	21	16	17	5	33	17
Religious, social obligations	0	5	15	7	7	5	2	9	5	3
Adult status, social norms	7	9	6	15	0	11	10	9	5	4
Ratings of reasons for having children										
To continue family line	.36	.36	.49	.57	.40	.34	.31	.39	.35	.39
To please relatives	.25	.09	.34	.12	.25	.22	.25	.23	.23	.25
Religion	−1.16	−1.04	−1.35	−1.09	−1.06	−1.25	−1.21	−1.04	−1.27	−1.03
Odd to be childless	.25	.13	.08	−.01	.01	−.03	.19	.06	−.06	.03
To be a woman/man	−.33	−.38	−.26	−.52	−.27	−.50	−.17	−.17	−.19	−.22
Percentage mentioning over-population among disadvantages	0	5	6	5	0	5	2	0	3	2
Percentage considering over-population a somewhat serious or very serious problem	97	92	77	87	83	73	94	100	85	94
Percentage considering over-population a reason for themselves having fewer children	80	71	61	60	76	61	82	82	60	82

TABLE 23 Indicators of cultural props for high fertility among high-

Indicator	Philippines		Turkey		Indonesia	
	HPN	LPL	HPN	LPL	HPN	LPL
WIVES						
Percentage mentioning advantages						
Family name, line	9	10	6	13	35	38
Religious, social obligations	1	0	10	9	3	0
Adult status, social norms	1	0	6	21	0	0
Ratings of reasons for having children						
To continue family line	.02	−.00	.38	.13	.13	.18
To please relatives	−.14	−.08	−.17	−.40	−.03	.07
Religion	−.37	−.31	.23	−.38	−.15	−.23
Odd to be childless	.00	.04	.10	−.02	−.12	−.23
To be a woman/man	−.10	−.05	.16	.24	−.02	−.05
Percentage mentioning over-population among disad-vantages	0	0	0	0	0	0
Percentage considering over-population a somewhat serious or very serious problem	71	84	21	67	36	46
Percentage considering over-population a reason for them-selves to have fewer children	58	77	9	52	17	25
HUSBANDS						
Percentage mentioning advantages						
Family name, line	0	14	4	25	53	33
Religious, social obligations	0	7	55	23	1	6
Adult status, social norms	0	0	6	24	0	0
Ratings of reasons for having children						
To continue family line	.10	.05	.13	.37	.10	.12
To please relatives	−.07	−.15	−.09	−.50	−.03	−.16
Religion	−.49	−.48	.18	−.11	−.04	−.16
Odd to be childless	−.10	.05	.08	−.13	−.20	−.32
To be a woman/man	.00	−.02	.28	−.05	−.11	.01
Percentage mentioning over-population among disad-vantages	0	0	0	0	0	0
Percentage considering over-population a somewhat serious or very serious problem	63	73	9	73	49	69
Percentage considering over-population a reason for them-selves to have fewer children	55	56	9	64	22	48

parity nonlimiters and low-parity limiters, by country and sex: 1975–76

Thailand		Korea		Taiwan		Singapore		United States	
HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL	HPN	LPL
2	8	16	7	39	30	25	17	11	5
2	3	7	0	2	1	0	1	6	2
0	0	5	5	2	9	2	1	6	17
.09	.22	.53	.29	.27	.24	.24	.09	−.49	−.28
−.09	−.17	.24	.30	.02	−.03	−.13	.07	−.80	−.58
−.17	−.72	−1.24	−1.11	−.48	−.69	−.75	−.88	−.52	−.58
−.06	−.21	.15	.18	.09	.12	.13	.14	.04	−.28
−.07	−.12	−.37	−.29	.14	.27	.28	.16	.09	.01
0	0	0	0	0	0	0	0	0	3
87	83	71	91	81	93	86	92	36	75
49	52	58	72	49	77	24	53	12	55
3	17	10	20	45	42	23	18	0	9
7	4	0	5	0	4	6	0	0	4
0	1	0	9	0	12	0	1	0	14
.23	.32	.37	.16	.28	.20	.19	.13	−.44	−.18
−.11	−.24	.25	.06	.13	−.06	−.26	−.01	−.94	−.58
−.49	−.76	−1.33	−1.01	−.62	−.81	−.59	−.75	−.44	−.52
−.03	−.16	.15	.06	−.02	.12	.24	−.01	−.44	−.51
−.06	−.07	−.38	−.42	.23	.15	−.15	.06	−.32	−.38
0	0	0	7	0	0	0	0	0	4
71	75	90	99	53	92	88	91	57	61
40	59	85	91	29	71	44	53	46	42

transition—i.e., for tribal rather than peasant societies. This hypothesis cannot be tested with the current samples.

Overpopulation. Prediction C7, that concern with overpopulation relates to lower fertility, also follows from the weakening cultural props factor, though I argued earlier that this prediction was not essential to the factor. Overpopulation was very low in salience on the open-ended question. In the U.S. sample, 3 percent of wives and 5 percent of husbands mentioned overpopulation, and the percentages dropped off from there. None of the comparisons across countries, across Philippine and Korean sample areas, between nonlimiters and limiters provided sufficient contrasts to support this prediction (Tables 20 to 23).

On structured questions, more variation could be observed. Concern with overpopulation, like financial costs, seemed to peak in moderate-fertility countries, then decline in low-fertility countries. Within countries no firm trend could be established: in the Philippines concern with this problem did not consistently increase at lower fertility levels, and in Korea there was only a slight increase in the number who said they took overpopulation into account in childbearing. Between nonlimiters and limiters, however, the contrasts were clear and consistent. Limiters more often considered overpopulation a serious problem and more often judged it a reason for having fewer children themselves. Why these contrasts appeared whereas other contrasts did not is not clear.

The variations in the values and disvalues related to the cultural props explanation may mirror cultural norms and practices rather than socioeconomic development or fertility levels. Concern with the family line, for instance, appeared to be high in the more patriarchal societies regardless of development level. Concern about overpopulation appeared to reflect official birth control programs and family planning propaganda rather than development level. The data do not deny that the weakening of cultural props for high fertility may be a factor in the fertility transition in a particular country where these props are initially strong. However, weakening cultural props do not seem, from the evidence of these value measures, to be an essential part of the fertility transition as a universal process.

Mortality reduction

Only tangential evidence regarding Prediction D1, that mortality reduction should make the achievement of security through many children a less prominent value, appeared among the open-ended responses.

One disvalue, worry over children's sickness, may be relevant to mortality reduction. This disvalue did appear to decline in salience across countries, as earlier observed (see Table 12). This disvalue aside, mortality reduction was alone among the predictions in not being reflected among advantages or disadvantages of children. This finding may have been largely due to the way the questions were phrased, contrasting children and no children rather than different numbers of children.

Some evidence regarding Prediction D1 is available from a separate question. Each respondent was asked what she or he thought of having an only child and what was the basis for that evaluation. The responses were open-ended, and occasionally vague, such as not wanting an only child because it is "not good for the parents." Those who specifically mentioned that an only child might die, that if he died there would be no one to replace him, or that they would be more secure with more children are shown in Table 24. The frequency of such explicit references to mortality risks varied considerably across countries, being highest (between 27 and 41 percent) in Turkey and Thailand, lower in the other high-fertility countries, and (except for Taiwan) zero in the moderate and low-fertility countries. Across regions in the Philippines (Table 25) concern with mortality rose slightly rather than falling. No comparisons were possible within the Korean sample because no one explicitly mentioned mortality risks. Across individuals the differences were not consistent (Table 24). In Thailand it was the limiters among both wives and husbands who mentioned mortality risks more often, as was also true with husbands in Turkey, but among husbands in Taiwan it was the nonlimiters who mentioned such risks more often. There is thus some indication that, at moderate and low fertility levels across countries, children beyond the first were less useful for providing insurance against mortality, but within countries the same prediction was not generally supported.

Correlations

A statistical summary of the findings is provided in Tables 26 and 27 in the form of correlations, across countries and across sample areas for the Philippines and Korea, between fertility rates and the frequency with which each value and disvalue was mentioned on the advantages or disadvantages question. The tables also give mean percentage differences across countries between high-parity nonlimiters and low-parity limiters in frequency of mentioning each value and disvalue. Because the structured measures are more varied, these tables do not include them. The tables have to be treated with caution. Particularly for sel-

TABLE 24 Percentage who considered an only child undesirable because of mortality risks, among all respondents and among high-parity nonlimiters and low-parity limiters, by country and sex: 1975–76

Sex and type of respondents	Philippines	Turkey	Indonesia	Thailand	Korea	Taiwan	Singapore	United States
WIVES								
All wives	17	41	12	33	0	8	0	0
High-parity nonlimiters	23	41	13	29	0	5	0	0
Low-parity limiters	15	35	15	42	0	3	0	0
HUSBANDS								
All husbands	16	27	12	31	0	12	0	0
High-parity nonlimiters	10	7	12	21	0	15	0	0
Low-parity limiters	14	23	6	35	0	2	0	0

NOTE: Base for percentages includes those who considered an only child desirable.

TABLE 25 Percentage who considered an only child undesirable because of mortality risks, by sex and region: Philippines, 1975

Sex	Bicol	Min-danao	East Visayas	Central Luzon	Cagayan	West Visayas	Central Visayas	Ilocos	South-ern Tagalog	City of Manila
All wives	14	15	12	19	24	17	16	25	15	25
All husbands	13	11	15	8	9	25	22	9	17	17

TABLE 26 Association between fertility level and perceived advantages of children: summary measures, by sex, 1975–76

Advantage	Correlation across countries with 1976 crude birth rate		Correlation across regions with 1968 TFR, Philippines		Correlation across sample areas with 1974 TFR, Korea		Mean percentage difference across countries, HPN–LPL		Correlation across countries with 1976 per capita GNP[a]	
	Wives[b]	Husbands	Wives	Husbands	Wives	Husbands	Wives	Husbands	Wives	Husbands
Instrumental assistance										
Help in housework	.73	.70	.68	.47	.64	.58	8.3	4.9	−.51	−.39
Help in old age	.75	.70	−.59	.06	.74	.75	11.6	11.7	−.75	−.70
Financial, practical help	.87	.84	.56	.39	−.03	.29	8.0	6.1	−.78	−.68
Family name, line	.07	−.04	−.42	−.08	.54	.40	1.9	−5.0	−.42	−.35
Religious, social obligations	.56	.40	.58	.08	.20	−.04	1.9	2.0	−.31	−.15
Adult status, social norms	−.60	−.29	−.61	−.14	.16	.19	−3.9	−6.9	.76	.43
Rewarding interactions										
Companionship, love	−.81	−.90	.47	.37	.35	.51	−7.0	6.3	.73	.88
Happiness	−.19	−.06	.00	.58	−.34	−.24	−6.7	−7.0	.03	−.17
Play, fun, distraction	−.23	−.53	−.24	−.60	−.35	−.17	−3.4	−6.7	.15	.42
Marital bond	−.82	−.84	−.45	−.66	−.56	−.30	−7.9	−9.3	.92	.84
Psychological appreciation										
Living through children	−.37	−.37	−.03	.08	.07	−.56	−.1	−.7	.61	.54
Achievement, power	−.45	−.49	.20	.36	.37	.10	1.1	−2.0	.57	.60
Character, responsibility	−.69	−.36	.22	−.69	−.50	−.30	−.7	−1.3	.80	.12
Incentive to succeed	.24	.00	.66	−.12	−.14	.30	−1.7	1.1	−.42	.19
Fulfillment	−.82	−.68	−.54	.03	−.13	−.45	−2.9	−4.5	.97	.90
Insurance against mortality[c]	.71	.72	−.60	−.27	[d]	[d]	.1	−1.9	−.44	−.52

NOTE: The .05 level of significance (one-tailed) is reached for all these correlations somewhere between .51 and .56 or −.51 and −.56.

a Source of GNP data: Population Reference Bureau (1976).

b West Germany was included in calculations for this column, except for the last row, but excluded everywhere else.

c From the separate question on an only child.

d Cannot be computed because this value was not mentioned by respondents.

TABLE 27 Association between fertility level and perceived disadvantages of children: summary measures, by sex, 1975–76

Disadvantage	Correlation across countries with 1976 crude birth rate		Correlation across regions with 1968 TFR, Philippines		Correlation across sample areas with 1974 TFR, Korea		Mean percentage difference across countries, HPN–LPL		Correlation across countries with 1976 per capita GNP	
	Wives[a]	Husbands	Wives	Husbands	Wives	Husbands	Wives	Husbands	Wives	Husbands
Financial costs										
Cost of education	.79	.80	.09	−.44	.73	.53	2.0	2.9	−.56	−.39
Other financial costs	.16	−.16	.17	.09	.54	.80	4.9	18.9	−.09	.17
Childrearing demands										
More work	.03	−.05	.34	.63	−.38	[b]	−1.3	.5	−.19	−.18
Emotional strain	−.46	−.59	.49	.58	.15	−.18	−1.0	−1.1	.10	.14
Health, pregnancy	.61	.42	.40	.29	−.75	−.44	0.0	−1.1	−.29	.10
Discipline	.51	.37	−.10	−.44	.57	.63	−2.5	−2.4	−.52	−.36
Child's sickness	.55	.49	.39	.01	.12	.18	−3.1	−7.6	−.44	−.33
Worry over child's future	.18	−.01	−.34	.53	.29	.44	−1.5	−1.0	−.11	.18
Other childrearing problems	.23	.51	−.11	.67	.14	.23	1.1	2.5	−.11	−.37
Restrictions on parents										
Tied down	−.88	−.76	.22	−.68	−.17	−.08	−13.6	−8.0	.96	.97
Can't work	−.71	.34	.37	.19	.09	.09	−3.3	−2.3	.80	−.15
Costs to social relationships										
Marital strains	−.50	−.44	−.25	.25	−.36	.10	−1.1	−2.6	.64	.58
Overpopulation	−.49	−.60	.09	.12	.15	.17	−.4	−1.4	.76	.78

NOTE: The .05 level of significance (one-tailed) is reached for all these correlations somewhere between .51 and .56 or −.51 and −.56.

a West Germany was included in calculations for this column, but excluded everywhere else.

b Cannot be computed because this value was not mentioned by respondents.

dom mentioned values, large correlations can be produced by a single or a couple of high percentages. For values that vary only slightly in salience, a small change can produce a sizable correlation. Moreover, as observed earlier, some values did not increase or decrease in salience linearly, showing greater change at one or the other end of the fertility continuum. These caveats aside, the tables do provide some objective measure of the trends that have been discussed.

Table 26 confirms the greater salience of economic benefits from children at higher fertility levels (or lower salience at lower fertility levels) and the inconsistent trends in social benefit values. It also confirms the increase in salience of enhanced marital bond through children and, to some extent, of companionship with children at lower fertility levels, plus slight similar trends in some psychological appreciation values. Table 27, on the disadvantages of children, confirms that perceived child costs did not increase, and, in some cases, actually decreased with lower fertility; that childrearing demands changed with lower fertility, though not necessarily upward or downward in the aggregate; and that restrictions on parents increased with lower fertility. In the correlations across countries, it makes little difference whether 1975, 1976, or 1977 crude birth rates are used, since these are all highly correlated. A more refined rate, the 1973 gross reproduction rate, also gives similar results.

The last two columns of each table present correlations across countries with 1976 per capita GNP. Since per capita GNP and fertility are highly related in this sample, the last two columns resemble the first two in each table except for sign. Where the correlations vary slightly, what is mainly reflected is the somewhat anomalous position of Turkey. The values and disvalues for the Turkey sample seemed to imply lower fertility than actual rates. The pattern of responses was generally closer to the moderate-fertility than to the high-fertility countries, with which Turkey formally belongs. As noted earlier, this sample also had more limiters and fewer nonlimiters than expected. Turkey's per capita GNP in 1976 was more than double that of any of the other high-fertility countries, above Korea's and close to Taiwan's, which suggests a possible explanation for this pattern.[13]

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13 A recent study of fertility decline in 94 developing countries (Mauldin and Berelson, 1978) confirms that Turkey is a special case. It was one of only two countries with substantially greater decline than expected from measures of modernization and family planning program effort.

SUMMARY AND CONCLUSION

Data from both open-ended and structured questions on values and disvalues attached to children provided clear and unequivocal support for one of the five demand-related explanatory factors for the fertility transition, sharp disconfirmation for another of the factors, and ambiguous or conflicting results for the other three factors. The economic factor, vanishing economic roles for children, was supported by the expected variations in perceived economic benefits from children, and these perceptions were clearly tied to fertility intentions. On the other hand, the cultural factor, weakening cultural props for high fertility, was not supported. Other studies on the value of children have indicated that, in both traditional and modern settings, social pressures to have children are seldom mentioned and are given little importance (Arnold and others, 1975; Bulatao, 1975). There is nothing here to contradict that finding.

The demographic factor, mortality reduction, found support from the perceived disadvantages of having an only child. Concern with insurance against child mortality did not appear among the general advantages of children, however, nor did it relate to fertility intentions, thus leaving some doubt about the importance of this factor.

The social factor, the emergence of the conjugal family, was related in the prediction set to one cluster of values and three clusters of disvalues. The prediction relating to values was supported, but the predictions relating to disvalues were not. Children's companionship and reinforcement of the marital bond did become more salient at low fertility levels, and were related to small-family intentions in low-fertility areas. But the increases in marital strain, in childrearing demands, and in perceived financial costs that were predicted to accompany the value changes did not appear. The closest thing to the predicted increases in disvalues was a somewhat greater emphasis on the emotional strain of childrearing at moderate and low fertility levels. I had assumed earlier that the increase in some values attached to children as a result of the spread of the conjugal family would be more than offset by increasing disvalues. Since this was not the case, could there be some other way the emergence of the conjugal family contributes to fertility decline, independently of the other factors? One possibility would be that values involving closeness to children and spouse may be adequately attained only with small families. There may be other possibilities, but since this is only speculation it might be left for further research.

The psychological factor, higher aspirations, similarly had its share

of successes and failures. As predicted, some of the psychological appreciation values were higher in salience and importance at low fertility levels. Contrary to predictions, however, the financial costs of children and childrearing demands did not rise as fertility fell.

Financial costs were a factor in individual fertility intentions, but may have been counterbalanced by higher incomes and did not appear to be a factor in areal and country comparisons. Again as predicted, perceived restrictions on parents were higher at low fertility levels and related systematically to fertility intentions. Two aspects of the aspirations factor were earlier distinguished: aspirations the parent has for herself or himself (the "time cost" aspect) and aspirations for the children. The positive evidence relates entirely to the former, the negative evidence to the latter. The aspirations factor therefore splits neatly in half, half supported and half contradicted by the data.[14]

Few of the trends in values and disvalues examined in relation to these factors were linear across fertility levels. There seemed to be not one but two value-of-children transitions, the first between high and moderate fertility levels and the second between moderate and low fertility levels. Table 28 attempts to summarize the values and disvalues that were observed to distinguish each stage.

The assumption is that the secular transformation of values is not a smooth process, and that particular changes are important at particular points in the fertility transition. This assumption helps account for some apparent contradictions between country, regional, and individual comparisons. For instance, restrictions on parents increased across countries but not across Philippine or Korean sample areas, and they also failed to distinguish limiters and nonlimiters, except in the

14 Although this study was not specifically designed to test Caldwell's (1977) restatement of demographic transition theory, it is worth noting the several positive as well as negative implications for his theory. Economic benefits did decline, as he would have predicted, but economic costs did not rise, contrary to his expectations. The decline in benefits was gradual, and related at each stage to lower fertility. There was no indication of Caldwell's "great divide," that point where the direction of the wealth flow changes and the transition supposedly takes place. The emotional nucleation of the family did appear in the data, but its link to the wealth flow was not established. Economic benefits appeared to decline before the values related to family nucleation increased. Other social and psychological reasons for childbearing, which Caldwell demoted to second-level determinants, in fact appeared to be at least equally important, particularly the factor of personal aspirations. There are, therefore, elements of perceptiveness in Caldwell's formulation, but the organization of the elements is not persuasive.

TABLE 28 Observed changes in values and disvalues attached to children

Explanatory factor	Transition from high to moderate fertility levels	Transition from moderate to low fertility levels
Vanishing economic roles for children	Financial, practical help declines	Financial, practical help declines
	Help in housework declines	Help in old age declines
Rising aspirations		Being tied down rises
		Fulfillment rises
		Achievement, power rises
	Cost of education declines (contrary to prediction)	
	Emotional strain rises	Discipline declines
Emergence of the conjugal family	Cost of education declines (contrary to prediction)	
	Emotional strain rises	Discipline declines
	Companionship, love rises (less sharply)	Companionship, love rises (more sharply)
	Fun rises (less sharply)	Fun rises (more sharply)
	Marital bond rises (less sharply)	Marital bond rises (more sharply)
Weakening cultural props for high fertility		Adult status, social norms rises (slightly, contrary to prediction)
Mortality reduction	Insurance against mortality declines	

low-fertility country. The failure of these disvalues to relate to fertility levels within countries at earlier stages of the transition is understandable if these disvalues do not increase in prominence until late in the transition. Similarly, rewarding interactions values rose across countries, but, in the low-fertility country, were linked with higher rather than lower individual fertility. If interest in interaction rewards reaches a plateau at a relatively high level late in the transition, as this interest ceases to increase it could become linked with having more rather than having fewer children. The economic benefit values provide a more in-

tricate illustration: specific values are differentiating only at specific levels, in accordance with the pattern shown in Table 28.

The pattern of changes indicates that the mortality reduction factor operates in the early transition, the vanishing economic roles factor in both early and late transition, the conjugal family factor to a slight extent in the early and to a greater extent in the late transition, and the aspirations factor predominantly in the late transition. It bears emphasizing that two other factors in the fertility transition—increased contraceptive availability and delayed marriage—should also be operative, but they are not represented in Table 28 because they are not demand factors and have no direct implications for values and disvalues attached to children.

The changes in positive values indicated are all monotonic though not necessarily linear. Disvalues may be different. Perceived financial costs and childrearing demands seem to rise for moderate-fertility countries and then fall off slightly for low-fertility countries. This finding suggests the possibility that, at intermediate levels, a perceived costs-of-children squeeze takes place that wrings out some of the "extra" children. When, over the long run, conditions for couples improve, the lost children are not made up, perhaps because other values and disvalues have come into play.

Regarding disvalues, too, there were two cases where individual comparisons produced differences but country comparisons did not. Perceived financial costs was one case, where nonlimiter-limiter comparisons indicated some link to fertility but country comparisons did not (other than the hypothetical intermediate squeeze just mentioned). Concern with overpopulation was another case: limiters were more concerned than nonlimiters, but this concern was no stronger in low- than in high-fertility countries. The disjunctions suggest that these social and economic concerns—and possibly others—may be relatively "permanent" concomitants of lower fertility that exert similar, basically unchanging influence under each fertility regime.

It is entirely possible that, with the small number of countries covered, what I have interpreted as high-to-moderate and moderate-to-low patterns in fact originate in cultural or other national differences unrelated to stage in the fertility transition. Different sequences may be possible for different countries with distinctive histories and cultures. Since the focus has been on comparisons, individual factors may have been missed that contribute to the transition in specific countries or cultural groups, though not generally. The interpretations that have been made are limited by the countries that have been con-

sidered. A different pattern for the value-of-children transition or transitions could conceivably have been obtained with a different set of countries. It would be worth investigating a different set, and, even more, collecting longitudinal data on several countries to avoid confounding cultural contrasts. If such data confirm the conclusions in this paper, it would be worth investigating next how transitions in the values and disvalues of children are produced, and what specific mechanisms link the changing values and disvalues to fertility intentions and behavior. It has not been the aim of this paper to answer these questions, but merely to attempt to implicate values and disvalues of children in the fertility transition.

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